CT Department
Work Flow Tip
Exam: Power Injectable Devices

Scanners: All Scanners

Revised: 7-5-12
1. **Central Line**: An infusion tube located near the heart, which is at the center of the circulatory system. For example, a PICC Line catheter with its tip just above the cavoatrial junction, is a central line.

2. **Power Injector**: An injector for rapid contrast medium injection in angiography, computed tomography, or MRI.

3. **Peripheral IV**: Often just called an IV, is a short, thin, plastic tube called a catheter that goes through the skin and into a vein. IVs are used to deliver fluids and medications to patients who cannot take food or medications by mouth, or who require medications that can only be given directly into the bloodstream.
Central Line Power Injectable Devices

Power Ports:

- **Bard Power Port**
- **Angiodynamics Smart Port**
- **Xcela Smart Port**

**Max PSI:** 300
**Max Rate:** 5mL per sec

Pt must present ID card or have documentation in EPIC that the device is a CT/MR Power Capable Device.

Access to a PowerPort® Implantable Port must be via a PowerLoc® Safety Infusion Set if power injecting.

**FLUSHING VOLUMES**
- Port not in use:
  - 5 ml heparinized saline, every 4 weeks
- After each infusion of medication or TPN:
  - 10 ml sterile normal saline, then 5 ml heparinized saline
- After blood withdrawal:
  - 20 ml sterile normal saline, then 5 ml heparinized saline
- After Power Injection of Contrast Media:
  - 10ml sterile normal saline, then 5 ml heparinized saline

**PowerLoc® Access Needle Flow Rates During Power Injection**

<table>
<thead>
<tr>
<th>Size</th>
<th>19 Ga.</th>
<th>20 Ga</th>
<th>22 Ga</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Cream</td>
<td>Yellow</td>
<td>Black</td>
</tr>
<tr>
<td>Max Flow Rate</td>
<td>5mL/s</td>
<td>5mL/s</td>
<td>2mL/s</td>
</tr>
<tr>
<td>Max Pres. Setting</td>
<td>300 psi</td>
<td></td>
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</tbody>
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*Bard, PowerPort, PowerLoc. “Feel the New Standard of Care” and the color purple are trademarks and/or registered trademarks of C.R. Bard, Inc. or an affiliate.

Bard Access Systems, Inc.
Salt Lake City, UT 84116 USA 801-595-0700
Clinical Information Hotline: 800-444-3385
0711752 0605R

Ref:
Central Line Power Injectable Devices

- Max PSI: 300
- Max Rate: 5mL per sec

Non-Power Central Line Injectable Devices
These Devices are **NOT** Power Injectable, peripheral IV needs to be placed. Hand inject is optional upon verification with Radiologist if last Result

**PERITONEAL IMPLANTABLE PORT**
- IP Chemotherapy
- IP Drug Administration
- Self-Sealing Silicone Septum
- Silicone Radiopaque Catheter
- Silicone-Filled Suture Holes

**HOHN® CENTRAL VENOUS CATHETERS**
- Easy-to-use preattached clamp
- Durable low-profile luer-lock adapter
- Soft tip
- Soft silicone suture wing
- VitaCuff® Antimicrobial Cuff
- Medical-grade radiopaque silicone

**Hickman® Internal(IJ)/External(EJ) Central Line**
- Staggered Atraumatic Tip Design
- Three High-Capacity Lumens
- Triple Lumen Configuration
- Polyurethane Catheter
- Low Radial Resistance

**TRIFUSION® Catheter**

**GROSHONG® CATHETERS**
- Three-way Groshong® valve
- Negative pressure opens valve inward
- Positive pressure opens valve outward
- At neutral pressure, valve remains closed
- Reduces costs
- Decreased flushing frequency
- Simplified routine maintenance

**STATLOCK® PICC PLUS STABILIZATION DEVICE**
- The STATLOCK® PICC Plus Stabilization Device offers greater versatility and ease of use.
- Combining the latest in design and engineering technology, STATLOCK® PICC Plus Stabilization Device readily secures most unweighted catheters on the market.
- Just lift the transparent “grip wings,” place catheter wings over the ports, and close.
- Anchor pad available in breathable, nonabsorbent blood polyester or closed-cell foam.
- Sterile and latex-free.

**ARGYLE™ Umbilical Vessel Catheters**
Designed with both the patient and the clinician in mind, ARGYLE™ Umbilical Vessel Catheters (UVC) set the standard of care for premature infants. The ARGYLE™ product portfolio includes single, dual and triple lumen UVCs and a full line of NEO-SERT™ insertion trays. All products are latex and DEHP free. UVCs benefit the patient by reducing the need for painful venipunctures and provides double or triple the access of a single lumen catheter. This allows simultaneous multiple therapies from one device. The NEO-SERT™ insertion trays provide everything needed for the procedure in one preassembled disposable tray. The UMB-ET™ catheter anchor provides a convenient, safe and secure way to anchor umbilical catheters.

Peripheral IV

Rated up to 10.5mL per sec
Optimal IV used for CTA work using High Injection Rates. Location must be in RAC/LAC to High ForeArm.

Rated up to 3.5mL per sec
Optimal IV used for Routine Protocols not to exceed 3cc per sec. Location must be in RAC/LAC to High ForeArm.

Rated up to 2.0mL per sec
Not regularly used in CT as a Power Injectable Peripheral IV, but can be used as a Peripheral IV that can be Hand Injected.

Rated up to 6.5mL per sec
Optional IV used for CTA work/Routine injection rates not to exceed 5cc per sec. Location must be in RAC/LAC to High ForeArm.

Upper Forearm: Optional IV Location for CTA/Routine Exams

Lower EXT: Can only be used if verified with a Rad. Generally it would be Hand Injected.

Wrist/Hand: Department Policy is that we do not use this site for Power Injections. If last resort confirm with Radiologist and Nursing Staff

RAC/LAC: Optimal IV Location for CTA/Routine Exams
• Peripheral IV sites need to be inspected and test injected with arms above head (per exam) with NSL before Power Injection is to take place. If not a viable IV, possible extravagation may occur. Contact the Rad Nurse or Floor Nurse if there is any question concerning whether or not a IV is suspect and should not be used.

• Questions or Concerns when it comes to IV placement and injection rate contact the Radiologist assigned in RIS.

• Two attempts at peripheral IV placement should be made before contrast injection through non power-injectable PICC is considered. **For adult patients:** An additional two attempts may be made by the radiology RN and/or IVT RN (total of 4 attempts). Consider patient age, diagnosis. Pediatric patients and pediatric oncology patients may have limited access and patient’s physician may want limited PIV attempts.

IV Therapy Pager: 1-7211

• Contrast CT exams of the HEAD: May hand inject PICC lines (Non Power-injectable).  
• Hickman: Pediatric patients: May hand inject A Hickman for body/chest