



Neutral displacement  
needlefree technology that  
provides a safe and effective  
microbial barrier.



## MicroClave<sup>®</sup>

Neutral Displacement Connector

Clinically-proven needlefree technology  
designed to reduce the risk of bacterial  
contamination and improve patient outcomes.

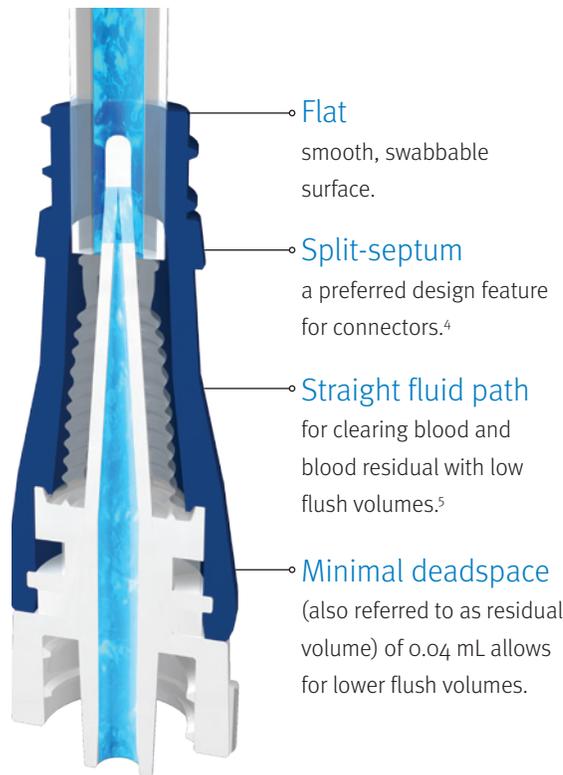
**icumedical**  
human connections

The MicroClave is an extremely versatile neutral displacement needlefree connector that can be used on all peripheral, arterial, and central venous catheters for the administration of IV fluids or medications, and can be used with blood products.

The design of your needlefree intravenous (IV) connectors plays a substantial role in your ability to limit hospital-acquired bloodstream infections (HA-BSI).<sup>1</sup>

The neutral displacement straight fluid path design, split-septum and minimal deadspace of the MicroClave work together to help minimize blood reflux into the tip of the catheter upon connection or disconnection of the luer.

Not only does the MicroClave provide enhanced patient safety through innovative technology but it has also been proven to provide an effective microbial barrier against bacteria transfer and contamination.<sup>2,3</sup>



## Features:

- › Minimal blood reflux in the catheter tip upon connection or disconnection of a luer.
- › Allows a saline flush option which can eliminate the risk of Heparin Induced Thrombocytopenia (HIT).
- › Clamping sequence not required, reducing educational burden and risk of error.
- › Does not require a change in clinical practice or technique and may help you address recent concerns raised by the FDA regarding the safety of positive displacement connectors.<sup>6</sup>
- › Approved for use with power injectors.

The MicroClave's neutral displacement design may help you address recent concerns raised by the FDA regarding the safety of positive displacement connectors.<sup>6</sup>

TECHNICAL SPECIFICATIONS		DRUG COMPATIBILITY	
Residual Volume	0.04 mL	Alcohol	Yes
Flow Rate at Gravity	165 mL / minute	Lipids	Yes
Functional Activations	600	Chlorhexidine	Yes
Blood Compatibility	Yes	Chemotherapy	Yes
MRI Compatibility	Yes		
High Pressure Compatibility	10 mL / second		

1. Jarvis W., MD. Choosing the Best Design for Intravenous Needleless Connectors to Prevent Bloodstream Infections. Infection Control Today, August 2010 <http://www.infectioncontroltoday.com/articles/2010/07/choosing-the-best-design-for-intravenous-needleless-connectors-to-prevent-bloodstream-infections.aspx>.
2. Ryder M, RN, PhD. Bacterial transfer through needlefree connectors: Comparison of nine different devices. Poster presented at the Annual Society for Healthcare Epidemiology of America (SHEA) conference 2007, Abstract 412.
3. Moore C, RN, MBA, CIC. Maintained Low Rate of Catheter-Related Bloodstream Infections (CR-BSIs) After Discontinuation of a Luer Access Device (LAD) At an Academic Medical Center. Poster presented at the annual Association for Professionals in Infection Control and Epidemiology (APIC) Conference 2010, Abstract 4-028.
4. Guideline for the Prevention of Intravascular Catheter-Related Bloodstream Infections, Final Issue Review, May 17, 2010 ([http://www.cdc.gov/hicpac/pdf/BSI\\_guideline\\_issuesMay17final.pdf](http://www.cdc.gov/hicpac/pdf/BSI_guideline_issuesMay17final.pdf)).
5. Data on file at ICU Medical. Low Volume Flush Characteristics of Unique Needlefree Connectors M1-1223 Rev. 1.
6. FDA Medical Device Safety Alert, July 28, 2010: Letter to Infection Control Practitioners Regarding Positive Displacement Needleless Connectors (<http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm220459.htm>)