

Designed To Prevent Infections

The Nexus TKO® (“To Keep Open”) Anti-Reflux technology is designed to deliver I.V. Catheter Patency 24/7™!

Catheter-related bloodstream infections (CRBSI) challenge all healthcare professionals today and have significant impact on both clinical and financial resources. The connection between thrombosis and infection is well documented and identifies significant colonization rates in areas of clot formations and its linkage to higher rates of catheter-related sepsis and catheter related septicemia when thrombosis is present^{1,2,3,4,5,6}

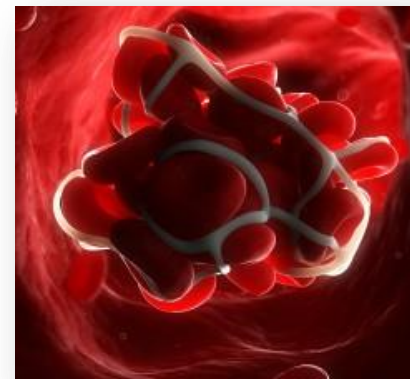
- TKO has been proven to reduce occlusions and tPA by up to 85%⁸
- TKO is designed with 3-Levels of microbial barrier protection⁹
- The TKO design was validated using 4-separate bacteria in GLP lab testing⁹
- The TKO design was validated using 96-activations over 96 hours⁹
- The TKO design was exposed to over 7,200,000 cfu’s of each bacteria⁹
- The TKO design was exposed to 3-separate incubation cycle for 18 hours⁹

CRBSI’s challenges all health care professionals today



Clotted Catheters are known contributors to catheter-related bloodstream infections (CRBSIs)^{1,2,3,4,}

- 87% percentage of all bloodstream infections involve some type of IV device¹⁷
- Catheter occlusions lead to catheter replacement, increased risk of complications, added patient stress and risk of infection¹⁴
- CRBSIs are the most costly and life threatening of all healthcare acquired infections¹⁴
- CRBSIs cost up to \$35,000 per episode, with more than 250,000 episodes per year in the US⁶
- “Centers for Medicare and Medicaid Services (CMS) no longer reimburse hospitals for vascular catheter-associated infections (initiated October 2008)”⁷

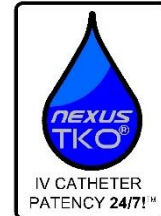


Red Blood Cells trapped in fibrin thread creating a thrombus (NIH)

Nexus TKO® Technologies provide Two important levels of protection

The Nexus TKO® technology is designed to protect both ends of your catheter. First our TKO technology reduces blood reflux from the tip of the catheter. Second our TKO technology provides microbial barrier protection which has been validated to 96-activation without microbial growth.

- Nexus TKO® Anti-Reflux Technology provides protection against the costly risk of blood reflux.^{7,8,9,10,11}
- Nexus TKO® is proven to reduce central line occlusions by up to 85% and at the same time eliminate Heparin flushing from the formulary.^{9,10}
- Nexus TKO® with its patented Tri-Seal™ design provides proven microbial barrier protection against bacterial transfer and colonization.^{9,10}



Nexus TKO® Tri-Seal™ Design provides Microbial Barrier Protection 24/7™

Our patented *Tri-seal™* Design with *Slit Lock™* technologies is designed into all of our Needle free technologies (NIS-5, NIS-6, NIS-6P, TKO-5, TKO-6 and TKO-6P). The Nexus TKO® *Tri-Seal™* Design provides **Microbial Barrier Protection 24/7™**. The *Tri-Seal™* design with *Slit Lock™* technology has been validated using 4-separate study groups with 4-separate bacteria by an outside GLP laboratory using a 96-activations protocol over 96-hours with 3-18 hour incubation cycles on 3-separate days.

The Nexus TKO® Tri-Seal™ Design Provides 3-Levels of Microbial Barrier Protection 24/7™

First Level of Protection:

A 360° compressed seal proven to provide a safe and effective microbial barrier protection between the septum and the needle-free connector housing

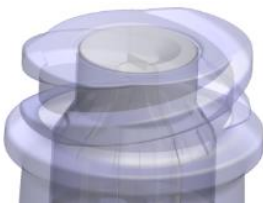
Second Level of Protection:

A smooth, easy to disinfect septum surface, promotes a safe and effective microbial barrier.

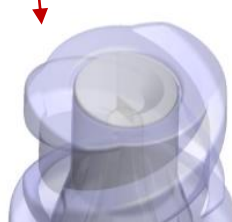
Third Level of Protection:

The *Slit-Lock™* septum protects the internal fluid path from microbial ingress while luer is activating

When not accessed, the Nexus Tri-Seal™ design forms a safe and effective microbial barrier



The Slit-Lock™ septum remains sealed until fully compresses deep inside the fluid path. (Self-Opening Slit Septum)



Our Slit Lock™ Technology forms an Invisible Slit Seal providing a Microbial Barrier Protection 24/7™



How The TKO Anti-Reflux Diaphragm Works

Nexus TKO® Anti-Reflux Technology Provides **"Blood Reflux Protection 24/7™"**!

The Nexus TKO® Anti-Reflux diaphragm automatically opens and closes based upon fluid pressure. The TKO diaphragm open towards the patient when fluid pressure from sources such as IV pump, syringe pump, IV bag, flushing or medication syringe are used. When the fluid pressure drops the TKO diaphragm instantly and automatically closes prevention blood reflux into the catheters.

Bi-Directional Flow Control 24/7™

*DOME SHAPED TKO™ Diaphragm
Single Piece-Crystal Clear
3-Position*



Opening
Pressure



15mmHg
0.3 psi



Aspiration
Pressure



300mmHg
6.0 psi

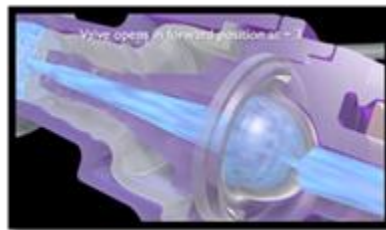


Infusion Flow Rate at 40 inches
4500mL/Hour



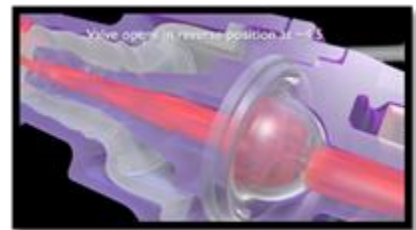
Normally Closed Position:

The TKO Diaphragm provides
Blood Reflux Protection 24/7™!



Flush/Infusion:

The TKO Diaphragm opens forward
with normal gravity pressure

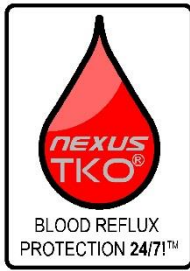


Blood Sampling/Patency Check:

The TKO Diaphragm opens in reverse
for safe and easy blood sampling

No clamping sequence required:

The Nexus TKO® Anti-Reflux technology requires
NO CHANGE in practice or clamping sequence, the device automatically provides
Blood Reflux Protection 24/7!



Nexus TKO® Clinical Evidence



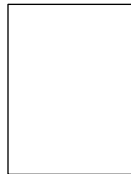
Nexus TKO®-6P: 96-Activation Microbial Performance Study by Nelson Laboratories, Salt Lake City, Utah



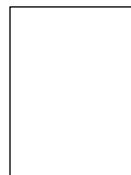
Nexus TKO®-6: 96-Activation Microbial Performance Study by Nelson Laboratories, Salt Lake City, Utah



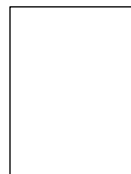
Nexus TKO®-5: 96-Activation Microbial Performance Study by Nelson Laboratories, Salt Lake City, Utah



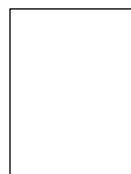
Nexus TKO®-6: Mechanical Hemolysis Study by Toxikon Corporation, Bedford, Massachusetts.



Nexus TKO®-5: Mechanical Hemolysis Study by Toxikon Corporation, Bedford, Massachusetts



Nexus TKO®-5: 96-Activation Microbial Performance Study by Nelson Laboratories, Salt Lake City, Utah



Occlusion Reduction and Heparin Elimination Trial Using an Anti-Reflux Device on peripheral and Central Catheters,
Jasinsky L, Wurster J, Journal of Intravenous Nursing, vol.32 Num. 1 Jan/Fed 2009. 33-40



Nexus TKO®-6: Blood Clearance Study by, Toxikon Corporation, Bedford, Massachusetts



Nexus TKO®-6P: Blood Clearance Study by, Toxikon Corporation, Bedford, Massachusetts



PICC and Midline Catheter Occlusion Rates: A perspective Study Comparing the Baxter Interlink Split Septum Device versus. Nexus TKO Pressure Activated Anti-Reflux Device, Mitch S. Brandmeyer B. White Paper 2010

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Product Overview

How it Works

Product Literature

Product References

Video

Cost Saving