FRESENIUS KABI
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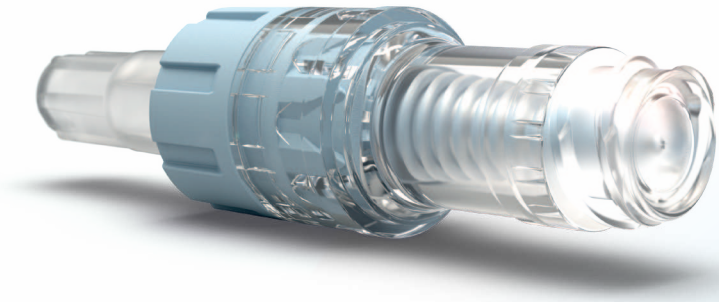
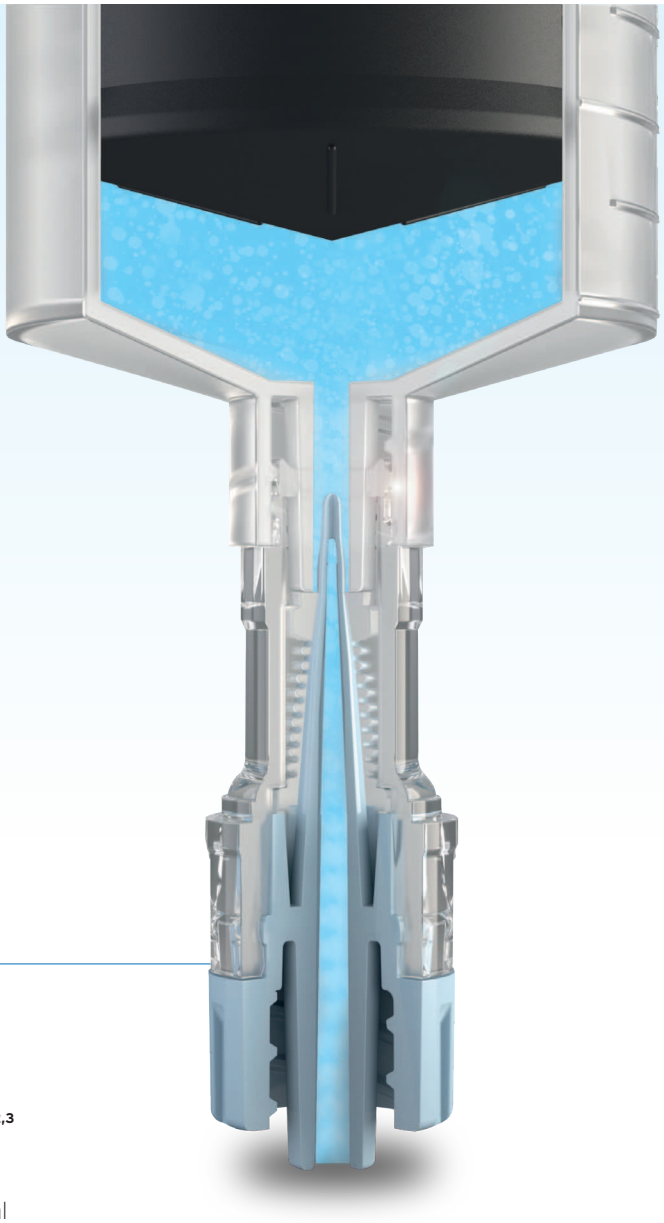
K-Zero®
Neutral displacement connector



Designed to enhance safety for you and your patients.
Helps to reduce the potential for catheter occlusions and prevents needlestick injuries.

K-Zero®
Neutral displacement connector

Designed to **minimize entry points for bacteria** between the connector's external surface and internal fluid path upon activation. **Helps to minimize the risk of bloodstream infections**.



Effective disinfection[1]

Tight seal between septum and housing. Smooth surface without any gaps or openings - easy to swab

No microbial ingress[1]

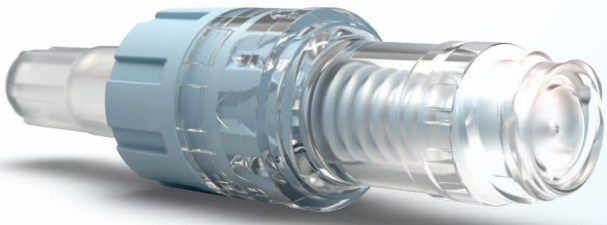
Split septum closes tightly after activation offering no point of entry for bacteria

Prevention of contamination

Concave septum entry is designed to eliminate syringe tip slip-off and potential contamination

Low flushing volumes[2,3]

Straight fluid path offers zero dead space. Minimal residual volume allows for effective flushing - lower risk of blood stream infections



Your solution for improved safety and ease of use - designed for you and your patient

Low risk of catheter occlusions[3] – neutral displacement prevents blood reflux while connection/ disconnection of a syringe

Closes automatically after disconnection[4] – provides a safe and effective microbial barrier to reduce the risk of catheter-related bloodstream infections

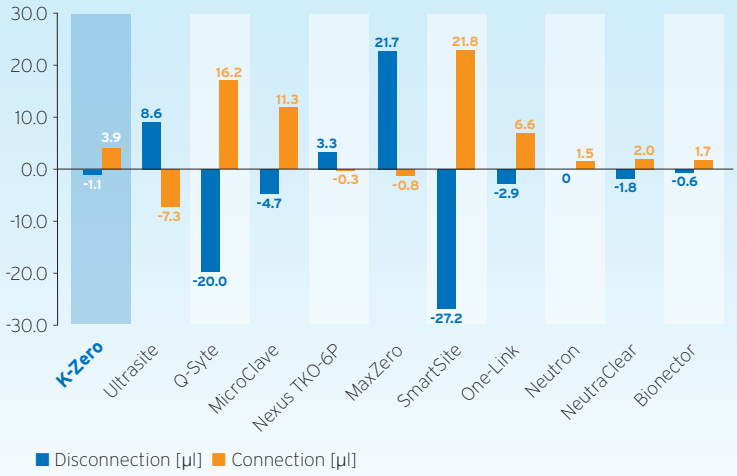
Versatile – can be used on peripheral or central venous catheters for the administration of blood, blood components, parenteral nutrition, fluids, and drugs

MR/CT compatible[4] – K-Zero does not contain any metallic or ferromagnetic components and is suitable for contrast power injections

No clamping technique required – neutral displacement is eliminating the need for any clamping

Fluid displacement[3]

K-Zero shows a low risk of occlusion due to minimal reflux



Microbial Ingress Study[1]

Simulation of repeated access and the use of the device in a clinical setting to evaluate the microbial ingress over a seven-day period.

Inoculation with 4 microbes which are associated with blood stream infections.

Each device was repeatedly accessed, disinfected and flushed with saline to simulate a worst-case test scenario with more than 300 activations per device over a period of 7 days.

All test devices were negative for recovered test organism. The microbial ingress test shows that the applied disinfection is effective on K-Zero.

S. aureus, S. epidermis, E. coli & P. aeruginosa			
	Test Devices 1-48 (12 per bacteria type)	Positive Controls	Negative Controls
Day 1	0 CFU	+/+	0 CFU
Day 2	0 CFU	+/+	0 CFU
Day 3	0 CFU	+/+	0 CFU
Day 4	0 CFU	+/+	0 CFU
Day 5	0 CFU	+/+	0 CFU
Day 6	0 CFU	+/+	0 CFU
Day 7	0 CFU	+/+	0 CFU

Performance specifications[3,4]

Fluid displacement	-1.1 µL at disconnection, +3.9 µL at connection
Priming volume	0.07 mL
Flushing volume	2 mL
Flow rate	125 mL/min
Pressure, power injection	250 PSI (17 bar), 10 mL/s
Usage	7 days or up to 300 activations
Blood compatible	Yes
Lipid compatible	Yes
Materials	Silicone, MABS, Copolyester
Not made with natural rubber latex	Yes
Not made with DEHP	Yes
Compatible with Luer Lock and Luer Slip	Yes
MR/CT compatible	Yes
Straight fluid path	Yes
Dead space (e.g. edges, barriers in the fluid path which particles could stick to)	None

Ordering information

Product description	Article number	Case quantity
K-Zero®	M79400849Y	400 pcs
K-Zero® Extension	M78401045Y	200 pcs

References

1. Performance data on file at Fresenius Kabi Microbial Ingress Testing (TD-TR-004983, DHF-EXD-004518)
2. Performance data on file at Fresenius Kabi Blood clearing analysis (DHF-EXD-004518)
3. Performance data on file at Fresenius Kabi internal study (DHF-EPB-006023)
4. Performance data on file at Fresenius Kabi internal test data (DHF-DVEB-005026)

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