Quality time for better care

TERUMO
MEDICAL CARE
SOLUTIONS

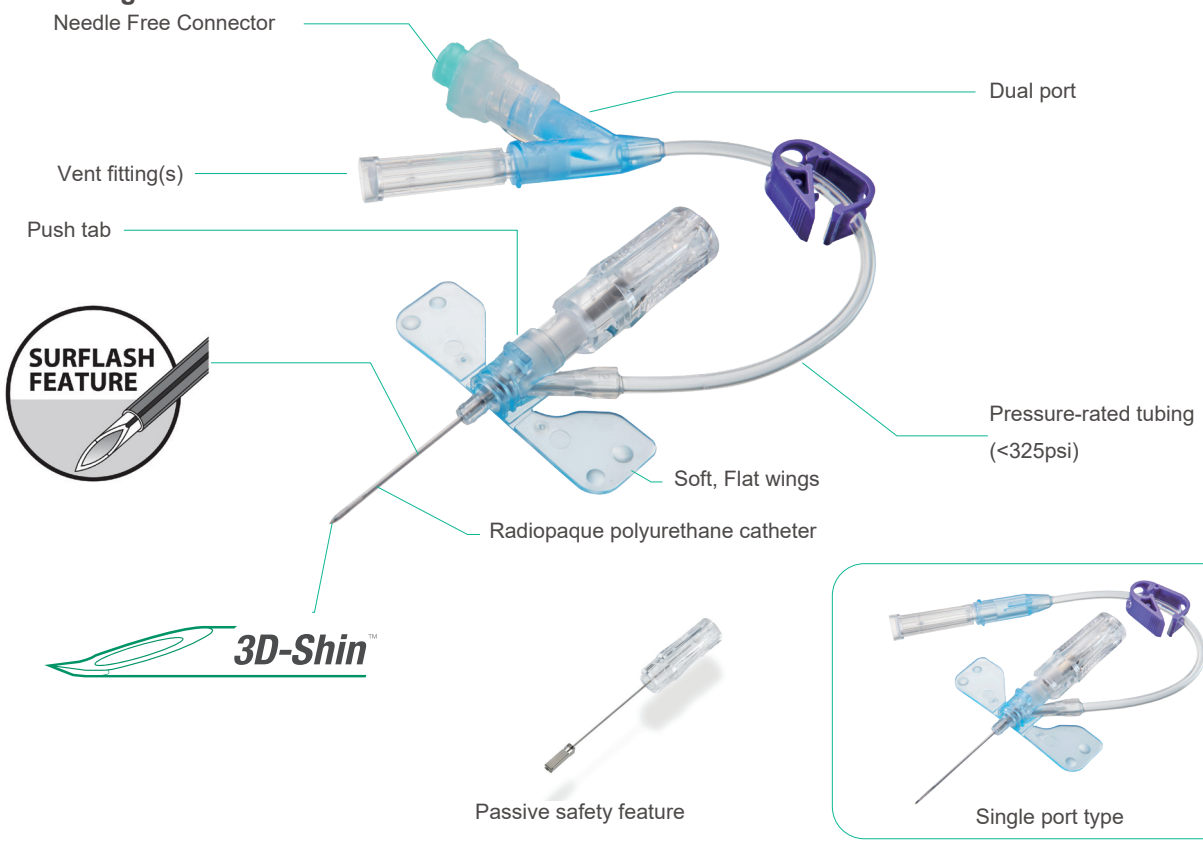
Closed I.V. Catheter

SURFLO™ HYBRIA™

3D-Shin™



Product image



SURPLUG™ AD Needle-free Connector (Split-Septum Design)



- Material Composition

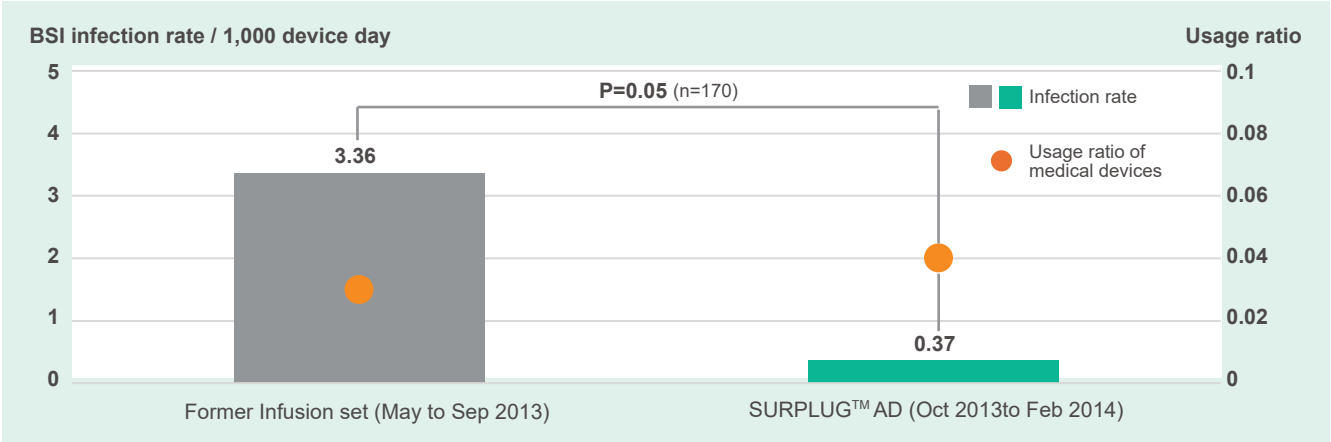
  Polypropylene (PP) and silicone rubber were selected for their broad chemical resistance.

- Easy-to-Clean Design

  A flat surface helps support effective cleaning and enhances visibility of the connector interior.



Reduction of Central Line-Associated Bloodstream Infections (CLABSIs) [1)]



Initiated by the introduction of SURPLUG™ AD, a comprehensive bundle approach was implemented, including standardization of infusion lines across the hospital, infection control education on proper disinfection of needle-free connectors, and optimization of dressing materials. These efforts contributed to a reduction in CLABSI cases.

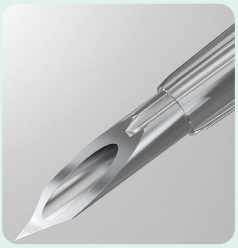
Enables More Reliable Puncture Success

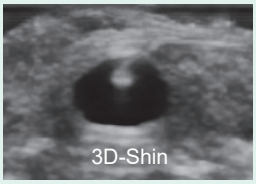
Improving First Attempt Success Rates

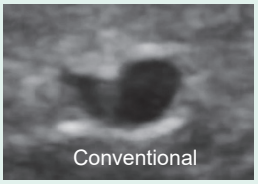
Combining 3D-Shin with Surflash is expected to increase the first-attempt success rate. [2)]

3D-Shin™

By combining a short bevel with a sharp cutting-edge angle—features that are traditionally difficult to integrate—this needle tip design helps minimize vessel deformation and reduces the risk of posterior wall puncture.[3)4)]



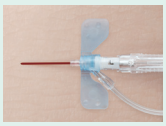


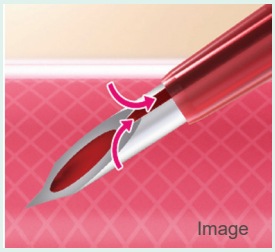


Compared with conventional and competitor needles, this design demonstrated less vessel compression and reduced needle displacement. [3)]
(Data from an internal ex-vivo model study conducted)

SurFlash™

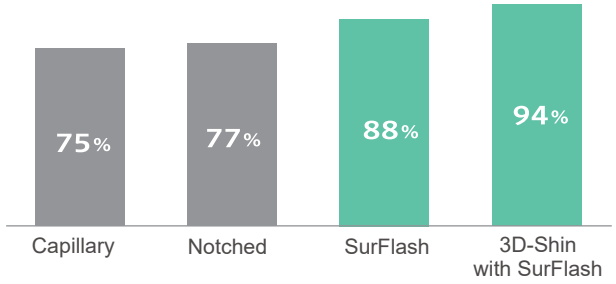
Grooved needle allows visual confirmation when catheter has been advanced into the vein.





A Comparative Study of Catheter Placement Success Rates Across Different Flashback Designs [2)]

Success rates were improved with 3D-Shin &SurFlash

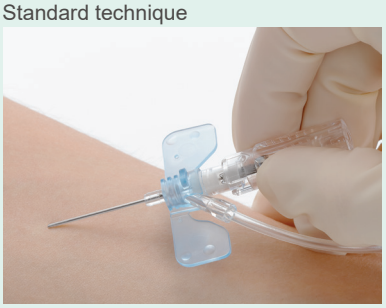


Nancy Moureau et al.; The Journal of Vascular Access 2025 :1–11

Insertion while holding the wings

The design offers an alternative insertion method, allowing catheter insertion while holding the wings.
The holding position is closer to the needle tip, enabling clinicians to insert the catheter while maintaining a grip near the insertion site.

Standard technique



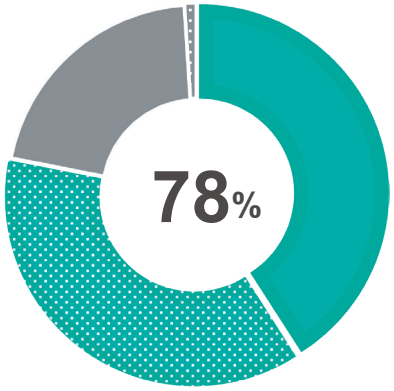
Wing-grip technique



Addressing the Causes of Insertion Failure

Up to 78% of insertion failures are associated with factors that could potentially be addressed through improved needle design and visualization. [5)]
3D-Shin™ and SurFlash™ are designed to help clinicians address these challenges. [2) 3) 4)]

Main factor of insertion failure [5)]



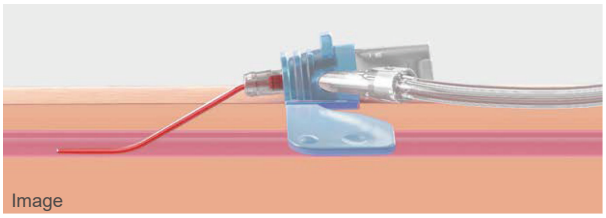
- The vein shifts(rolls) or deforms during needle insertion
- Flashback confirmed, but the catheter could not be advanced
- The needle failed to access the vein
- Other/Not sure

Supports Longer Dwell Times and Improved Healthcare Outcomes

Associated with Longer Dwell Time



Closed system PIVCs have been reported to be associated with longer dwell times and reduced complication rates, which may contribute to improved cost efficiency.[6)]



Supports Skin Comfort

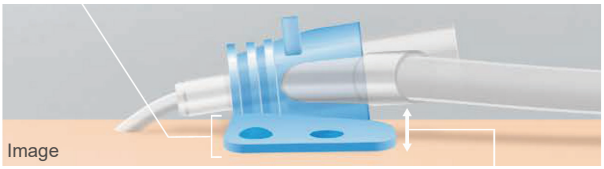
Soft and Flat Wings for MDRPU* Prevention

Rigid materials and localized pressure are among the causes of MDRPU*. [7)] A soft and flat wings design may contribute to improving patient comfort.

*MDRPU : Medical Device-Related Pressure Ulcers

Soft, flat wings that conform closely to the skin.





A non-contact gap with the skin

Simplified Skin Protection

By eliminating the luer lock connector at the insertion site, the integrated extension tube design supports skin protection with less padding or taping.



Product range

Product Name	Product Code	Catheter					Flow Rate (/min)	Tube Length	Tube L.D.	Priming Volume	Port	Needle Free Connector
		Gauge	Length	O.D.	I.D	Material						
SURFLO HYBRIA Closed I.V. Catheter	SH18252320AF	18G	25mm	1.30mm	1.04mm	Polyurethan	84 ml	11cm	1.6mm	0.65 ml	Single	None
	SH18322320AF		32mm									
	SH20252320AF	20G	25mm	1.10mm	0.86mm		58 ml					
	SH20322320AF		32mm									
	SH22192320AF	22G	19mm	0.85mm	0.67mm		33 ml					
	SH22252320AF		25mm									
	SH24192320AF	24G	19mm	0.67mm	0.52mm		18 ml					
	SH18252332AF	18G	25mm	1.30mm	1.04mm		84 ml			0.85 ml	Dual	2 Pcs
	SH18322332AF		32mm									
	SH20252332AF	20G	25mm	1.10mm	0.86mm		58 ml					
	SH20322332AF		32mm									
	SH22192332AF	22G	19mm	0.85mm	0.67mm		33 ml					
	SH22252332AF		25mm									
	SH24192332AF	24G	19mm	0.67mm	0.52mm		18 ml					

Reference

1)Masae T., et al. Toward Safer Infusion Lines—Safety Initiatives by a Medical Device Manufacturer in Healthcare Safety and Infection Control, Infection Control ICT Journal, Vol. 10, No. 1, 2015, p. 96–97

2)Nancy M., et al. Comparative study of peripheral intravenous catheter insertions with capillary, notched, and a grooved needle flashback design, The Journal of Vascular Access I –11, 2025

3)Hidenori T., et al. Effect of a thin-tipped short bevel needle for peripheral intravenous access on the compressive deformation and displacement of the vein: A preclinical study, The JVA I-9,2022

4)Hidenori T., et al. A short bevel needle with a very thin tip improves vein puncture performance of peripheral intravenous catheters An experimental study, The Journal of Vascular Access I-8,2020

5)Clinical Survey on Intravenous Infusion Device, results from 105 nurses working in U.S. acute care hospitals

6)J.L. Gonza´lez L., et al. Indwell times, complications and costs of open vs closed safety peripheral intravenous catheter a randomized study, Journal of Hospital Infection 86(2014) 117-126

7)Japanese Society of Pressure Ulcers (Ed.), MDRPU Best Practice: Prevention and Management of Medical Device–Related Pressure Ulcers, 2016, p. 87

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