

# MaxPlus<sup>™</sup> needleless connector & MaxPlus<sup>™</sup> clear needleless connector

In seven different facilities, the implementation of MaxPlus technology, in combination with clinical best practices, lead to an average CLABSI reduction of 70%.<sup>1</sup>

Improve outcomes, reduce costs, enhance safety



# MaxPlus<sup>™</sup> connector

With its flat, smooth, easy to swab surface, and dual seal bounce-back design, the MaxPlus™ connector helps reduce the risk of bacterial ingress, that can lead to blood stream infections (BSIs) and occlusions.



#### Fewer BSIs

Improve patient outcomes with MaxPlus, the needleless access connector with Tru-Swab™ Technology which assures the top of the MaxPlus connector is flat, smooth and free from voids which can harbor bacteria. The dual seal bounce back design means that the gland will always return to its original position. MaxPlus connector contains only one internal piece, allowing for clear flushing.

#### **Fewer Occlusions**

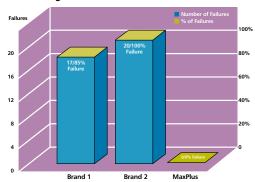
The MaxPlus connector was designed to reduce the occurence of occlusions due to reflux. Valves with negative/neutral displacement create an empty space in the catheter that can fill with retrograde blood. The positive displacement pulse of MaxPlus connectors helps to clear the catheter preventing reflux normally encountered at disconnection: customers have reported fewer catheter occlusions, less need for heparin and improved patient outcomes.

# POSITIVE DISPLACEMENT

#### MaxPlus connectors:

- Automatically displaces fluid out the catheter tip upon disconnection
- Help to prevent occlusions caused by reflux normally encountered at disconnect
- Help to reduce time and money spent on clearing occluded lines

#### **Microbial Ingress**



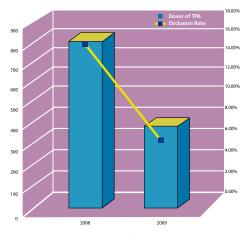
Victor Lange: Needleless Valves/Connectors: Infection Prevention (Poster INS 2008)

The MaxPlus connector had no failures in this microbial challenge.

MaxPlus™: 0/20 failures, 0%

**Competition:** 17/20 failures, 85% 20/20 failures, 100%

#### **Occlusion Reduction**



McCord, J. Beyond the Bundles for Reducing Central-Line Associated Bloodstream Infections: Additional Measure Used to Reach the Zero Target. Abstract Presentation: Association of Vascular Access 2010

A 56.5% reduction in occlusions was reported

#### The 7 day/200 activation change interval

- Enables users to comply with best practice guidelines for the prevention of IV device related bloodstream infections
- Encourages the maintenance of a closed system on IV catheter hubs

<sup>1 &</sup>quot;Implementation of Interventions to Sustain Reductions in Central Line Associated Bloodstream Infections" By Andre Schotte, RN, PhD. Poster presentation, Intravenous Nursing Society (USA) 2010



# MaxPlus<sup>™</sup> clear connector

In addition to the advantages of MaxPlus<sup>™</sup>, connector the MaxPlus<sup>™</sup> clear connector incorporates a clear housing that enables nurses to visualise the effectiveness of their flush technique.

"Impressive continued drop to zero CLABSI rate was noted with the implementation of clear positive displacement needleless connector as a cue to clean, flush, or change the valve."

Royer, T. Implementing a Better Bundle to Achieve and Sustain a Zero Central-Line Associated Bloodstream Infection Rate.Journal of Infusion Nursing 33(6):398-406 November/December 2010



### MaxPlus clear connector – clearly better!

Recent research and industry presentations have associated incomplete flushing of drug precipitates and transient blood in needleless access devices with an increase in catheter related bloodstream infections. It is believed that incomplete flushing occurs because the housing of most needleless access devices is opaque, which prevents visualization of the fluid path and efficacy of flushing.<sup>2</sup>

# MaxPlus clear connector promotes:

- Good practice, allowing nurses to access the effectiveness of their own flush technique and promptly correct less effective flushing.
- Clear visualization of the fluid path. The importance of swabbing, priming, and flushing is enhanced by a clear housing; seeing makes a difference.
- Residual clearance flush volume can be adjusted based on visual clearance.

## The Royer study – Clear value

The Royer study shows that, when his hospital implemented clear, positive displacement needleless connectors, Central Line Associated Blood Stream Infections (CLABSIs) dropped to zero. The reduction in CLABSI also saved costs of over \$241,000 in the first six months (as calculated, July 2007, VA Puget Sound Health Care System).

When used in combination with clinical best practives, MaxPlus and MaxPlus clear connectors help to:

- Reduce CLABSI's
- Reduce catheter occlusions
- Improve outcomes, reduce costs and enhance safety

CareFusion International Headquarters A-One Business Centre Zone d'activitiés Vers-la-Pièce no 10 1180 Rolle Switzerland +41 21 556 30 00 tel +41 21 556 30 99 fax

References available on request.

CareFusion Unit 3/167 Prospect Highway Seven Hills NSW 2147 Australia 1800 110 511 tel 1800 113 317 fax

References available on request.

CareFusion
14B George Bourke Drive
Mt. Wellington
Auckland
New Zealand
0508 422734 freephone
+64 9 270 6285 fax
References available on request.

CareFusion
Solbråveien 10A
1383 Asker
Norway
+47 66 98 76 00 tel
+47 66 98 76 01 fax
References available on request.

CareFusion
Unit 2 Oude Molen
Business Park
Oude Molen Road
Ndabeni
Cape Town 7405
South Africa
+27 21 510 7562 tel
+27 21 510 7567 fax
References available on request.

CareFusion Hammarbacken 4B SE-191 24 Sollentuna Sweden +46 8 544 43 200 tel +46 8 544 43 225 fax References available on request.

CareFusion UK
The Crescent
Jays Close
Basingstoke
Hampshire RG22 4BS
United Kingdom
0800 917 8776 freephone
+44 (0)1256 330860 fax
References available on request.

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