



**CLOSED  
SYSTEM**

PRESCRIPTION

PATIENT ACCESS

PREPARATION

APPLICATION

DISCHARGE  
MANAGEMENT

## Ecoflac<sup>®</sup> Connect S, M and L

A closed system for single dose antiinfective admixture

# Antiinfective Drug Preparation

Closed system reconstitution devices



» *Drug preparation is an irreplaceable part of hospital practices and carries major risks which are often underestimated.*

**CLOSED  
SYSTEM**

Not only the reason for a patient's hospitalization is a concern, they also face risks of microbiological contamination, medication error or DEHP exposure<sup>5-7</sup> during the length of their stay.

Additionally, healthcare workers are also confronted with risks, such as chemical contamination<sup>1-3</sup> and sharps injuries.<sup>4</sup> Literature demonstrates that these risks not only lead to health consequences<sup>1-4</sup>, they might also burden hospital expenditures.

Understanding these risks, B. Braun developed three devices fitting the most commonly used vial sizes: Ecoflac<sup>®</sup> Connect S, M, and L which support needle-free, closed system<sup>9</sup> reconstitutions of single dose antiinfectives.

The devices Ecoflac<sup>®</sup> Connect S, M, and L have been designed to prevent the major risks occurring during drug preparation:

- **Sharps Injury.** Their needle-free design support the unnecessary use of sharps during admixture in compliance with the EU Directive (2010/32/EU) on sharps injuries.
- **Chemical Contamination.** All three devices are proven closed systems<sup>9</sup> to help prevent continuous exposure to toxic and non-toxic drugs which has been proven to lead to sensitization such as allergic contact dermis.<sup>8</sup>
- **Microbiological Contamination.** Their closed system<sup>9</sup> design help to reduce potential entry of bacteria into the solution.
- **Medication Errors.** Designed to keep the medication vial attached through the administration of the medicine, Ecoflac<sup>®</sup> Connect offers the possibility to easily identify which medication is being infused to the patient.
- **DEHP Exposure.** Specifically produced with DEHP-free materials, Ecoflac<sup>®</sup> Connect supports the reduction of DEHP exposure and associated risks.

Ecoflac<sup>®</sup> Connect S, M, and L help prevent the risk of:

- **Sharps Injury**
- **Chemical Contamination**
- **Microbiological Contamination**
- **Medication Errors**
- **DEHP Exposure**

# Features and Benefits

## CLOSED SYSTEM<sup>9</sup>

All Ecoflac<sup>®</sup> Connect versions offer a closed system (acc. to NIOSH definition) which helps to prevent drug exposure for the healthcare worker and prevent nosocomial infection for the patient.



## PERMANENT CONNECTION OF THE VIAL **A**

The presence of the medication vial throughout the infusion is a supportive element for reducing medication errors.

## INBUILT VALVE **B**

Prevents free flow of reconstituted solution back into the medication vial during infusion.

## INTEGRATED CLAMPS **C**

The integrated clamps form a reliable connection with the Ecoflac<sup>®</sup> plus container so the system remains securely connected during admixture and infusion.

## NEEDLE-FREE DESIGN

The needle-free design of Ecoflac<sup>®</sup> Connect S, M and L eliminates the risks linked with manipulation of sharps.

## AUDIBLE FEEDBACK

The "click" sound which can be heard during connection of the medication vial confirms a secure connection.

## AUTOMATION OF PRESSURE BALANCING

The pressure balancing is performed automatically, which helps to decrease the risk linked to contamination.

## DEDICATED SPACE FOR IV-SET

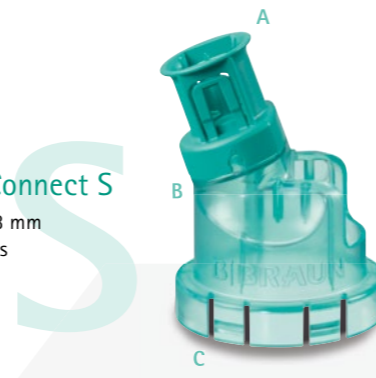
The design of all Ecoflac<sup>®</sup> Connect versions enables an easy access to the second germ-free port of Ecoflac<sup>®</sup> plus for inserting the IV-Set.

# Three Devices

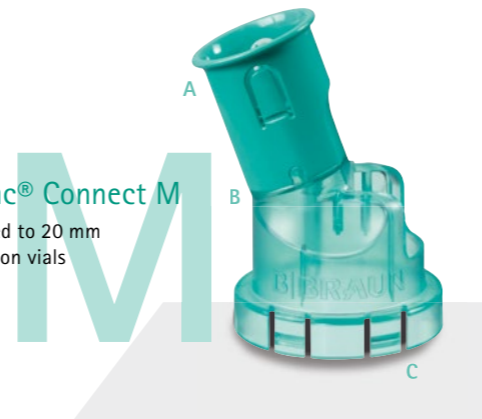
Want to see the handling video?  
Visit <https://www.bbraun.com/en/products/b/ecoflac-connect.html>  
or scan the adjacent QR-code.



**Ecoflac<sup>®</sup> Connect S**  
Dedicated to 13 mm medication vials



**Ecoflac<sup>®</sup> Connect M**  
Dedicated to 20 mm medication vials



**Ecoflac<sup>®</sup> Connect L**  
Dedicated to 32 mm medication vials



# One Handling Process



## 1 CONNECT

Insert Ecoflac<sup>®</sup> Connect onto the Ecoflac<sup>®</sup> plus. Then, spike the respective medication vials on the Ecoflac<sup>®</sup> Connect vial adapter.



## 2 RECONSTITUTE

While holding the system upside down, reconstitute the medication by applying pressure on the Ecoflac<sup>®</sup> plus with two hands.



## 3 DILUTE

Dilute the drug, by applying pressure with two hands on Ecoflac<sup>®</sup> plus, while turning the system upside-down.



## 4 SPIKE

Remove the second aluminum foil of the Ecoflac<sup>®</sup> plus and spike the IV-Set to prime the line and connect to the patient.

Note: The handling process is demonstrated using Ecoflac<sup>®</sup> Connect M. The handling is the same for Ecoflac<sup>®</sup> Connect S and L.

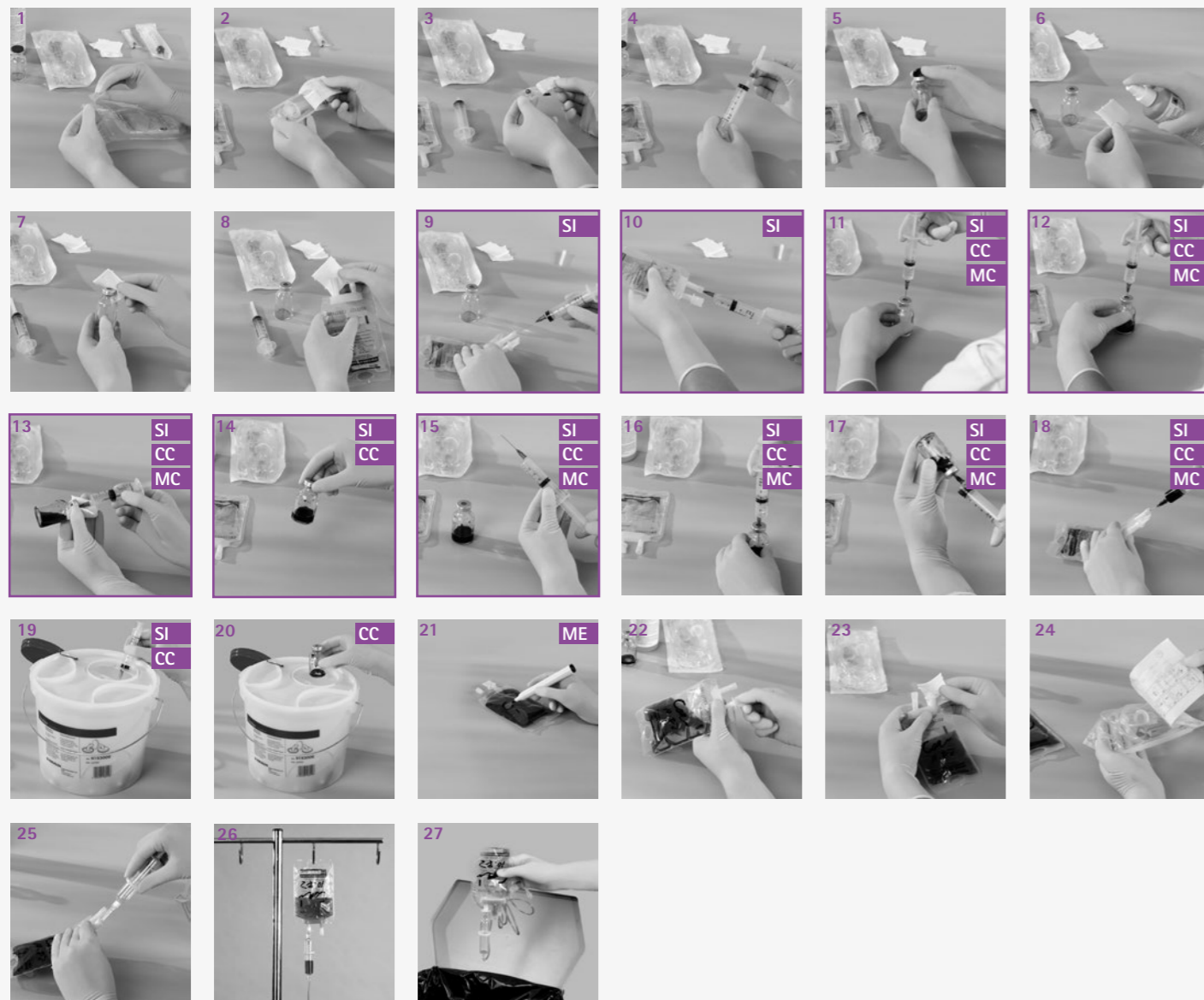
# Ecoflac® Connect S, M and L

Progressing from traditional to advanced admixtures

## Drug admixture with needle and syringe: 27 HANDLING STEPS

### POTENTIAL RISKS

- Chemical Contamination (CC)
- Microbiological Contamination (MC)
- Medication Error (ME)
- Sharps Injury (SI)
- DEHP Exposure (caused by the product properties)



## Drug admixture with Ecoflac® Connect S, M or L: OPTIMIZED TO 15 HANDLING STEPS

### USER AND PATIENT BENEFITS

- The Closed system minimizes chemical and microbiological contamination
- Reduces the risk of medication errors
- Prevents sharps injuries
- Saves time by reducing the steps during the admixture process



Ecoflac® Connect S, M and L reduce complex handling and help to prevent both users and patients being exposed to severe risks during reconstitution and administration of antiinfectives.

Are you interested in a comparative video?  
Visit <https://www.bbraun.com/en/products/b/ecoflac-connect.html>  
or scan the adjacent QR-code.



## ORDERING INFORMATION

Product	Units per box	Code no. (REF)
Ecoflac® Connect S	50	4090549
Ecoflac® Connect M	50	4090550
Ecoflac® Connect L	50	4090552

## LITERATURE

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3. Mälikönen T, Jolanki R, Alanko K, Luukkonen R, Aalto-Korte K, Lauerma A, Susitaival P. A 6-month follow-up study of 1048 patients diagnosed with an occupational skin disease. *Contact Dermatitis* 2009; 61(5): 261-8
4. Prüss-Üstün A, Rapiti E, Hutin Y. Sharps injuries: global burden of disease from sharps injuries to health-care workers. Geneva, World Health Organization, 2003 (WHO Environmental Burden of Disease Series, No. 3).
5. Gabriel J. Infusion therapy. Part two: Prevention and management of complications. *Nurs Stand.* 2008; 22(32): 41-8
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7. European Commission Health & Consumer Protection Directorate General. Adopted by Scientific Committee on Medicinal Products and Medical Devices. OPINION ON: Medical Devices Containing DEHP; Plasticised PVC; Neonates and Other Groups Possibly at Risk from DEHP; Toxicity. European Commission 1-34, 2002
8. Gielen K, Goossens A. Occupational allergic contact dermatitis from drugs in healthcare workers. *Contact Dermatitis*, 2001, 45, 273-279
9. Quality Labs Closed System Test Report - Ecoflac® Connect, 2013

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