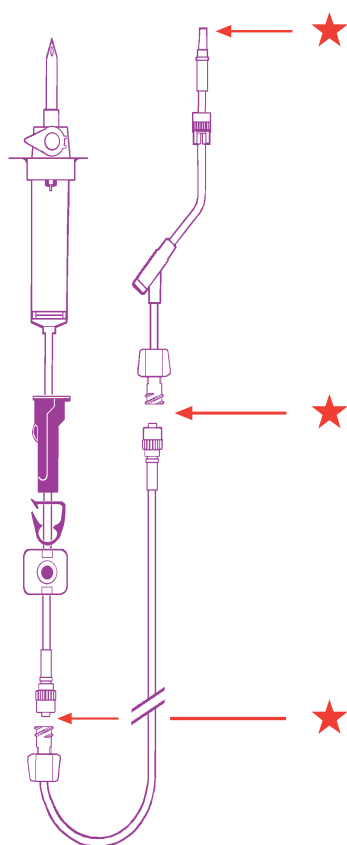


Patient Safety: Using Non-Return valves



Preventing back-flow in your infusion line ...

Inclusion of a one-way (check) valve at any point on a ModuFlo line minimises or prevents the risk of a number of problems we encounter commonly in practice. Their use improves patient safety, reduces nursing time and improves economy:

- Catheter occlusion due to micro back-flow of blood
- Blood loss due to damage to line proximal to valve
- Blood contamination of set proximal to valve



Valve design and function

- Silicone disc valve with low opening pressure
- Allows flow of fluid and air
- Simple male & female luer connection to fit into any luer connection
- When **upstream** pressure is higher than downstream (**normal infusion**) the valve is open and fluid or air flows distally
- When **downstream** pressure is higher than upstream (occlusion or **back-flow**) the valve closes and prevents blood entering catheter or line
- Prime the valve with fluid prior to use. This minimises risk of back-flow or air embolism

NOTE: Our check valve is '**always open**'. It needs a cap placing proximal to it when a line is disconnected to prevent siphoning of air into the line distal to the valve. The simplest method is to use our needle-free valve



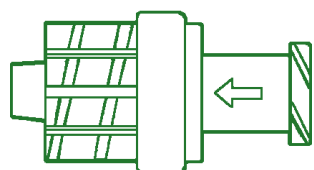
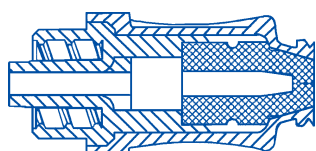
Check valve



Needle-Free valve



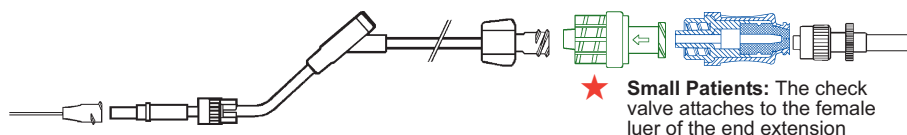
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Check Valve Positioning & Use

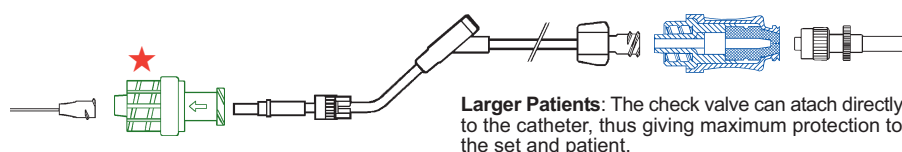
* **Check valves provide the most protection when they are placed as close as possible to the patient ***

- Always ensure the check valve is DOWNstream of the closing cap or needle-free valve
- If positioned onto catheter, you should replace the check valve at every catheter change
- There should always be a cap positioned proximal to the valve when the set is disconnected from it. The simplest and safest way of doing this is to use our needle-free valve.
- Final position will depend on a number of factors such as patient size, risk factors to IV line and importance of occlusion resistance. The following guidance is suitable for most patients:



Small patients

- ➔ Connect the valve into the end extension
- ➔ Allows full mobility
- ➔ Provides minimal bulk at catheter site



Larger patients

- ➔ Connect the valve directly onto the catheter
- ➔ Provides maximum patient protection
- ➔ Extra bulk at catheter site is normally well tolerated by larger patients

With ModuFlo sets, you do not need to worry about having end extensions etc in place when setting up your infusion; it's there already if you should need it