Specialty Filters
Specialty filters may be part of the tubing or could be an additional filter when using:

- rapid fluid/blood infusion devices
- cell salvage devices
- extracorporeal circuits (e.g., cardiac bypass, ECMO)
- syringe pumps for neonates
- bedside leukocyte reduction (not common practice)

Microaggregate and leukocyte reduction filters are common types of specialty filters.

Microaggregate filters (generally 20-40 micron) are used for specific instances of red cell transfusion such as during cardiopulmonary bypass or cell salvage collections. These filters are designed to remove smaller particles or particulate material from collected blood prior to reinfusion but will not remove WBC to the level required for a product to be considered ‘leukocyte-reduced’. Microaggregate filters should never be used for granulocyte transfusions because the filter removes some granulocytes resulting in a suboptimal product for the patient.

Leukocyte reduction filters are specifically designed to reduce the number of white cells in a red cell or platelet product. Performing leukocyte reduction during manufacturing is more effective than when performed at the bedside. Leukocyte reduction improves transfusion safety by reducing febrile non-hemolytic transfusion reactions, prevention of CMV transmission from blood products, and decreases the risk of developing antibodies that lead to poor response to platelet transfusions. Based on their purpose, leukocyte reduction filters should never be used with granulocyte transfusions.

Specialty filters are not generally used for routine blood transfusion.

Always follow your institution’s policy for blood administration

References:
1. Alexander M (ed). Infusion Therapy Standards of Practice. Journal of Infusion Nursing (2016); 16(1s).

If you have any questions please contact the TxMD staff at TxMDSupport@versiti.org or your Versiti Hospital Relations Specialist.