

# BLOOD BAG CATALOGUE

*Ensymm blood bag catalogue refers to the blood collection procedure and the product variations*



# BLOOD BAGS

## Blood Bags

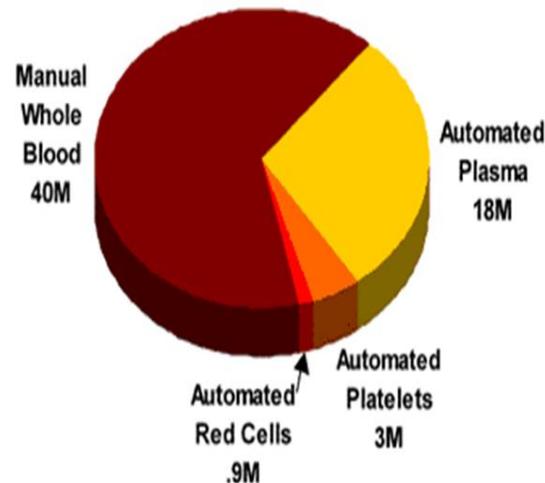
Blood donation and processing with these systems is supplemented by further devices such as automated scales, automated blood separators, sterile docking systems, sealers and filtration racks.

Donor products are a growing part of the large, global blood collection market. The chart below shows the estimated number of blood collections.

Blood bag systems are fundamentals for worldwide blood supply by "classical" blood donation. More than 90 percent of all blood donations are processed in these systems that have up to six different bags with variable functions. A combination of PVC bags with retractable needles, pre-

donation sampling pouches and different filtration devices form the basis for highly professional whole blood collection systems.

**Estimated Global Blood Donations**  
(units in millions)



## Blood Bag Collection Process The Manufacture of Blood Components

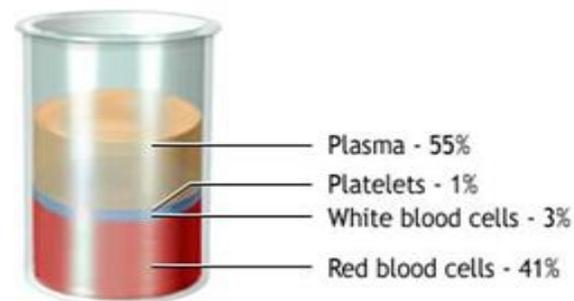
While donating, the donor's blood is collected into a plastic bag (the main bag), one part of a set consisting of three plastic bags connected with plastic tubes. The whole set is sterile and has never been used before. The tubes enable the transfer of parts of the blood from one bag to another without breaking the chain of sterility. The main bag contains matter preventing the blood from coagulating.

# BLOOD COLLECTION PROCESS

After the collection, the blood is centrifuged so that it is divided into three layers (please review the illustration below which shows the different components of blood) in the main bag, according to the density of each part. After the centrifugation, the plasma, which is on top, is pressed into an empty plastic bag (the plasma bag) through a plastic tube in the top of the bag. The red blood corpuscles, which are on the bottom, are lead into another plastic bag (SAG-M bag), containing liquid with nutrients for the red blood corpuscles, through a tube in the bottom of the bag. The layer in between, which remains in the main bag, is called the buffy coat. It contains large amount of blood

platelets and white blood corpuscle, and it is used for producing concentrates of blood platelets. Thus, the collected whole blood is split into three different components in each their plastic bag. In this way, it is possible to store the components separately under ideal conditions, depending on their respective requirements.

Components of Blood

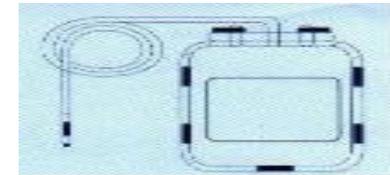


## BLOOD BAG VARIETES

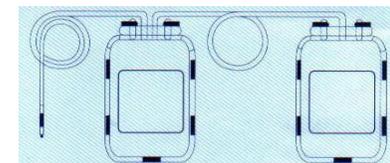
There exist five different scales and specifications for blood bags.

Briefly:

**Single Blood Bag:** Designed for collection, storage and transfusion of whole blood.



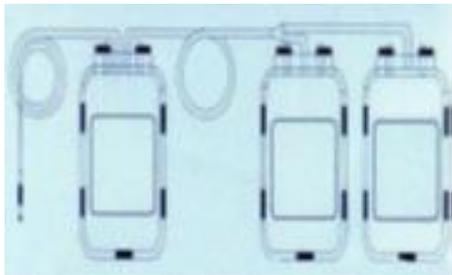
**Double Blood Bag:** Designed to separate whole blood into plasma and red cells. That eliminates the possibility of contamination.



# BLOOD BAG VARIETIES

**Triple Blood Bag:** Designed to separate whole blood into three parts:

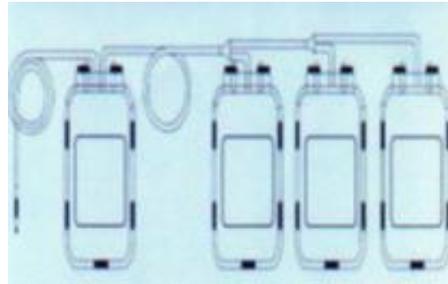
- Red blood cells, platelets & plasma
- Red blood cells, leucocytes & plasma



**Quadruple Blood Bag:** Designed to separate whole blood into four parts:

- Red blood cells, platelets, plasma & cryoprecipitate
- Red blood cells, leucocytes,

platelets & plasma



**Transfer Bag:** Designed to transfer specific blood components from whole blood donations.

Accessories like pipes, clamps, mono check adapters, needles, needle caps, sample bags, (leukocyte filter optional on demand), heat stable labels get assembled manually at an assembling line. Further the single bags get connected to

multiple bags (double, triple, quadruple). According to your order, all types of bags will be delivered completely with all accessories in a sterile packaging (two layers) to assure a contamination-free transport and storage.

According to the required standard ensymm can procure blood bags from different sources. You can choose between blood bags manufactured either in India or Europe. The bags in our program are CE certificated and manufactured under WHO/European GMP conditions.

**In case you are interested in our products, please feel free to ask for our price list including all certificates.**

ensymm is a German based premier project consulting company for Life Sciences, serving biotech companies, pharmaceutical industry and food ingredient companies. We provide clients with a variety of business and technology consulting services as well as with specialized teams in various areas of our competence.



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