Main Features

The main purpose of treating yarns in spray dyeing machines is to apply the lowest possible stress on the material, with the most delicate treatment.
This is the main focus of all our MBR machines, produced in atmospheric and pressure version (110°C) .
For general information on MBR machines and options available, please **refer to the pages form 4 to 7 of the present catalogue.**

Some additional features of the MBR machines are hereunder exposed:

Circulation pump: The pump is widely over dimensioned to allow a reduction of the rotation speed of the impeller and consequently less turbulence in the circulation.
The characteristic curve of the pump of each different machine, combines the required **flow with the lowest possible pressure.**
The positioning of the pump and the wide suction connection duct, allows a very low bath speed and permits to work with the lower possible volume of liquor avoiding pump cavitation.

Circulation circuit: The piping configuration between pump and arms, is realized to reduce at the minimum the speed of water which again reduces turbulence prior to the liquor distribution among the arms.

Pump flow regulation: The machine can be equipped with flow meter placed on the main circulation circuit. In this way it will be possible to set the desired pump flow according to the yarn and loading conditions of the machine (reduced loads are possible on all MBR machines.

Variable filling level: Filling level is controlled by liter counter and consequently it is possible to set any desired liquor ratio in different loading conditions.

Rotating arms: Realized in triangular shape, to permit hank rotation without an eccentric rotating part which might create additional friction on the yarn. Perfect mechanical polishing on the entire surface + final electro polishing.
The combination of these treatments allows a final superior grade of finishing for a further reduction of friction.

Rotation system: Each arm is equipped with individual self-breaking motor. This feature is very important since in case of motor failure, only one arm will stop and the rest of the arms will continue to work properly without necessity to stop the entire machine.

Heat exchanger: The machine can be supplied with internal coil or external shell and tube heat exchanger. Both versions are available.

Preparation tank: The preparation tank is placed on the top of the machine to shorten cycle time using pre-heated water.
There is no additional space requirement for the tank since it can fit entirely in the upper part of the machine keeping the same footprint.

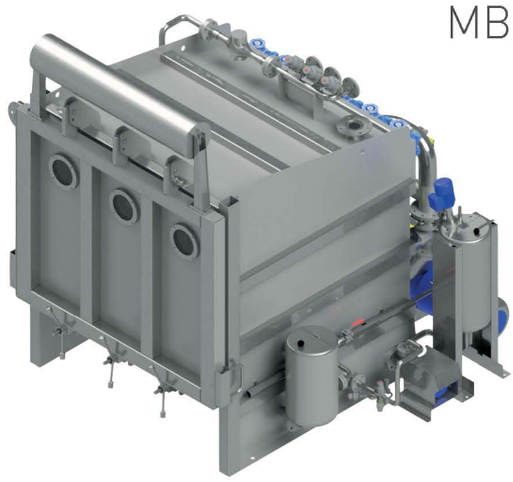
Liquor ratio: The machine body and pump have been engineered to minimize NPSH value. In this way, the pump can run without cavitation with the minimum possible level of water.

Machine opening: It has been given particular attention to the machine opening door which has to allow a comfortable loading/downloading of the material.

Loading/downloading: The machines can be equipped with **extractable sliding arms**, so that the material handling can be comfortable and easy once the arms are extracted on their supports.
If required, it is available the option to load/download the arms **with the use of trolleys** keeping a double set or arms per each machine.

Coupling connection: Two or more MBR machines can be connected to increase load flexibility and realize bigger dyelots.

MBR



Arms sealing system: The use of extractable arms requires to have a practical and long lasting sealing system on the arm seat. Leakage in this position will create abrasion on the yarn due to excess of water and unproper circulation throughout the arm itself. Our MBR machines are equipped with a special double set of rotating auto lubricating seals which allow long lasting performance and easy maintenance.

All MBR machines can work with partial loading by means of arms without holes to be positioned where material is not loaded. Special harms with half perforation can also be provided for further load partialization.
The positioning of these arms takes is very simple and requires a couple of minutes.