

# Making High Efficiency Ion Exchange & Filtration Units

**“By applying iX-Master™ technology in resin & media units for fluid processing”**

Our extensive field experience in the field of 'Water Treatment' (Over 30+ years) led us to explore new, innovative techniques which could be applied in resin & media units. It is not beyond the chemistry of adsorption /ion-exchange, but simple **immaculate hydraulics!**

Various types of distribution / collection systems (as internals of the vessels) currently being used, results in inaccurate column operations with respect to uniform flows, required over cross-section of the vessel, resulting efficiency loss!

Many astute engineers & plant operators new this fact, over a period of time, through their actual plant results.

Solution to the malfunctioning of the internals had been addressed by numbers & there are few technologies available in the world.....but not simple as our following developments:

**“Flow Modulation Techniques For Fluid Processing Units”** (Indian & International Patent Pending)

**“An Improvement In The Nozzles /Screens Used In The Fluid Processing Units”** (Indian & International Patent Pending)

## The new development features:

- # Highest efficiency of the media column – Guaranteed
- # Lesser regeneration & backwash required
- # Simplest construction of the internals & lower pressure drops
- # Easy implementation of the internals in the smallest to the largest pressure vessels
- # Applicable for varied flow & pressurized conditions
- # Minimum & easy maintenance
- # Can be implemented in the existing units during retrofit (Conditions apply)



- CHENNAI
- PUNE
- NEW DELHI
- BILIMORA

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## What Is **iX-Master™** Technology?

**iX-Master™** technology consist of unique “proprietary” arrangement of internals in the “distribution /collection” system of the resin /media units used in the water treatment & any separation application in the fluid /chemical processing (such as – All types of Ion-Exchange Units, Adsorption Columns & Media Filters).

**iX-Master™** technology consists TWO of our major developments in the **components** to improve hydraulics in the working column.

## What Is **Flow Modulation Techniques**?

**Flow Modulation** refers to “manipulation of the distribution & collection network” involved inside the pressure vessel so as to equalize fluid flow distribution over entire cross-section. So, achieving uniform flow distribution over cross-section of the media column by manipulating nozzle lengths and/or aperture control.

## What are **Improved Nozzles /Screens**?

Our “**360N-Series**” of nozzles are simple plastic replica of proven wedge wire screens— holding ‘Non-clogging’ properties & higher flow compared to other nozzles / screens. The popular HDPE /PP or UHMWPE plastics hold outstanding chemical resistance properties required in number of applications. Our nozzles/screens MOCs are different thermoplastics, suitable for varied applications.

## Where **iX-Master™** technology can be applied?

- Packed Bed—Ion Exchange Units (Upflow /Downflow)
- Conventional Ion Exchange Units (Co-flow / Counter Flow)
- Condensate Polishing Units (Any pressure rating)
- Media Filter Units (Any commercial size)
- Adsorption Columns (Any commercial size)
- Retrofit of the above units (Conditions apply)