

## Dopant Mixing System (DMS)

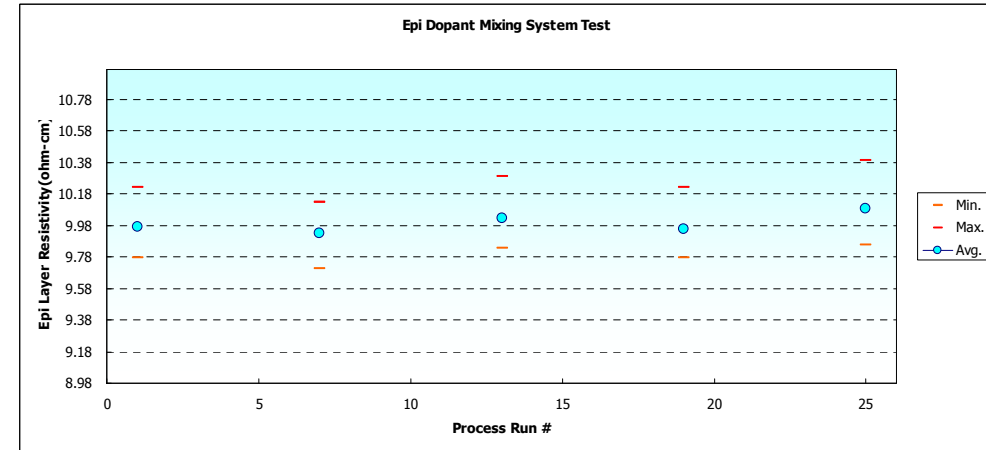
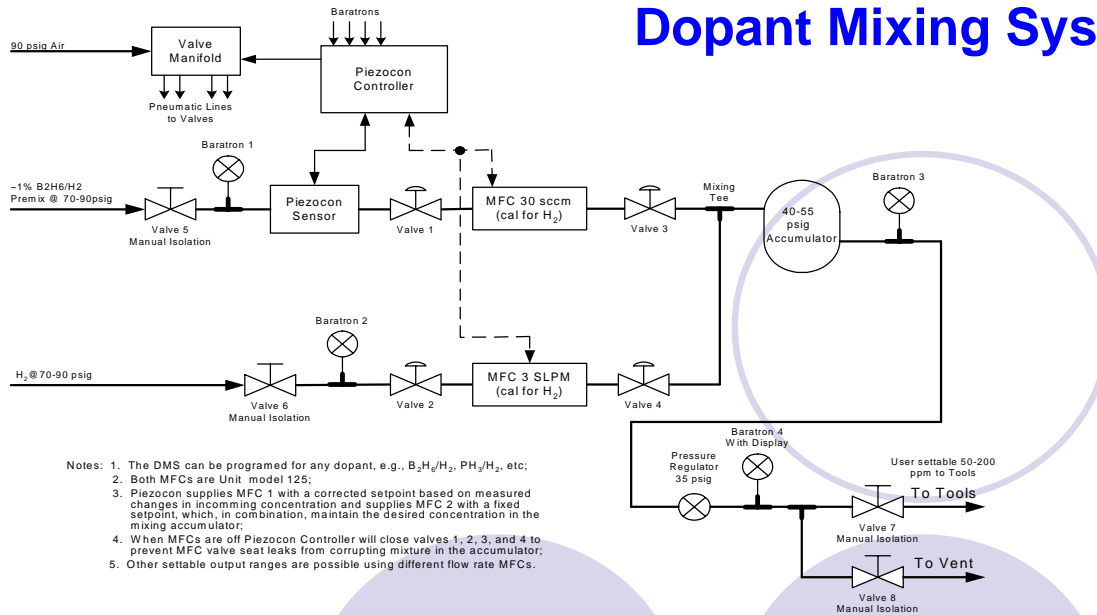
Creating a Virtual Bottomless Bottle of PPM Level Dopants



25 – 250 ppm mixture  
settable

- **Improves Dopant Concentration Reproducibility from  $\pm$  3 to 5% relative (chemical supplier's specs) to  $\pm$  0.25%.**
  - Greatly improves dopant process reproducibility.
- **Potentially reduces number of bottle changes by 100X.**
  - Significantly reduces dopant supply related expenses.
- **Greatly increases Tool Productivity.**
  - Virtually eliminates tool requals after bottle changes.
  - Tool availability increases by as much as 18%.
- **Very High ROI.**
  - Typically 2 to 6 months.

## Dopant Mixing System (DMS)



### Current Dopant Supply Chain:

Your gas supplier turns the equivalent one tank of 1% dopant into one hundred bottles of 100 ppm dopant and charges you to manufacture, store and deliver each and every one of them.

You pay for handling and exchanging each tank, and have to re-qualify your tool After every bottle change.

You may have to inventory multiple premix tanks for several mixtures, 75ppm, 100ppm, etc.

### Piezocon DMS Dopant Supply Chain:

Your gas supplier delivers one bottle of 1% dopant.

You pay for handling and exchanging, far less frequently, only one tank.

You use the Lorex DMS to deliver the 25 – 250 ppm mixture, settable to your tool beyond the shelf life of the bottle (typically 6 to 12 months) because the Piezocon will correct for end of shelf life concentration shifts.

