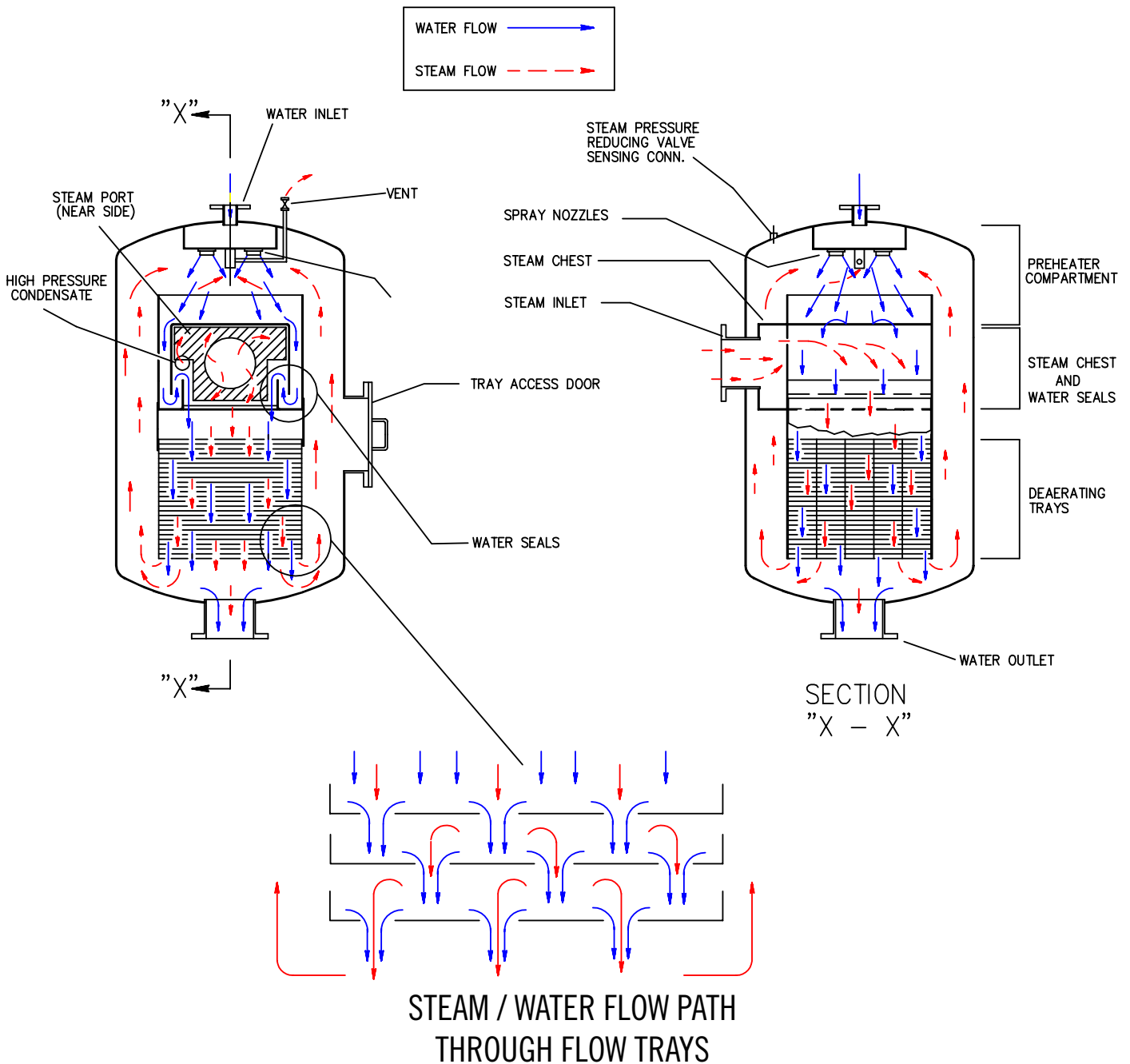


SPRAY TRAY DEAERATOR WATER / STEAM FLOW PATH



Inlet water is sprayed into a steam atmosphere through the variable orifice spring loaded spray valve. This thin film of water is then instantly heated to within 2-3 degrees of steam temperature driving out 90% to 95% of the dissolved gases. This heated water falls down to the water seal for distribution over the trays. The water seal serves two functions. First to prevent liberated gases from entering the tray bank, and second they direct the steam to flow down through the trays before entering the upper heating section

The main function of the tray bank is to remove the remaining amount of dissolved solids not liberated in the initial heating by gravity flow. These unique trays are slotted and direct flow downward and side to side. This creates a tremendous heating surface, with steam flowing downward with the water enhancing the final heating process.

Steam, after exiting the tray bank flows upward into the top section for the initial heating of the water from the spray nozzles. This steam is condensed by the colder water and dissolved gases are removed to atmosphere through the vent cup condenser assembly.

These flow paths in design make the PD series spray tray deaerators highly efficient in steam usage and provide a wide flow range, 2% to 100%, to the user.