

PCI AERATOR

Mechanical Aeration is a process whereby air is entrained into a liquid by a rotating surface aerator. Although the primary function of an aeration device is to introduce oxygen, mixing of the aeration tank contents is equally important as this ensures that all the living organisms make contact with the oxygen enriched liquid.

The PCI surface aerator has been designed to transfer the greatest possible amount of oxygen by maximising the pumping action of the aerator impeller. Large volumes of mixed liquor are lifted into the air and thrown onto the surface of the basin, creating vigorous turbulence as a heavy torrent races to the sidewalls before descending into the tank. Air drawn into the tank is forced by the continuous cascade of liquid, to find a difficult path to the surface and in so doing, remains in contact with the liquid for a long enough period for intimate blending of oxygen with the living organisms.



A multi bladed impeller driven by a heavy duty seamless tubular shaft, is suspended in the tank from the vertical output shaft of a generously rated gearbox. The PCI aerator is robustly configured to ensure that the blades radiating from a centre shaft are well supported and shaped to prevent rag accumulation. The drive is selected to deal with axial and radial loads imparted by the suspended aerator using generous service factors to ensure a long service life with reliable operation.

Variation of the oxygenation capacity is achieved by changing the speed. In this regard, the PCI aerator can tolerate immersion ranges that suit most applications. When the depth of the tank exceeds optimal proportions, a draught tube below the aerator can be installed to ensure that the liquid at floor level is raised and maintained in suspension.

The unusually high oxygen transfer rates and excellent mixing characteristics of the PCI Aerator make it the natural choice for energy efficient installations.



PCI Aerators are available as fixed bridge mounted units or as floating aerators where a tri-float arrangement is used to keep the device at the water level selected for the particular duty. The power of the aerator is selected to suit the requirements of each case and aerator designs are available to suit all motor sizes up to 110 kw.

PCI AFRICA

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