

## Equipment for determining the hydro-gas-dynamic performances

### DESCRIPTION:

The equipment consists of a Plexiglas rectangular tank of 1100x300x300mm, adapted for assembling porous diffusers of 50mm disk type, a compressor with pressure and flow controller, a rota-meter for measuring the air flow rate and a manometer for measuring the pressure drop on porous diffuser.

For measuring standard oxygen transfer rate (SOTR) and the volumetric oxygen transfer coefficient, the equipment is provided with an oxy-meter containing a microprocessor, an oxygen and temperature sensor for measuring the dissolved oxygen variation in time, a magnetic mixer (to maintain a permanent stir of the liquid from the measuring cell), a peristaltic pump (to assure a continuous recirculation of liquid in progress of aeration).

The data are automatically delivered via a software (sampling time period can be defined by user) to a computer having an analogical interface.

The equipment was designed and realized following the ASCE norms and, also, to keep in view of some constructive aspects (Plexiglas rectangular column) available of an experimental laboratory activities (visualization and photo). So, it assures an easy handling, visualization of hydro-gas-dynamic phenomenon and allows facile changing of the porous diffusers tested.

