



SAFE AND EFFICIENT OXYGEN / AIR MIXING USING THE OXYNATOR™

A dynamic fluid mixer based on swirl effects

Air Liquide has developed and commercialized a patented gas-gas mixing device using crossflow radial injection. (*Air Liquide patent US 5,356,213 EP 474,524*)
The Oxynator is designed to minimize mixing distance and to prevent high oxygen concentrations near the pipewalls. Oxygen flows radially from the center of the pipe and swirls in the air stream, improving mixing efficiency.

Performance beyond static mixers

A complete mixing after a short distance

The oxygen distribution variation coefficient (VC) characterizes the mixing efficiency of mixers.
The Oxynator allows fast and thorough mixing within 2D (VC<5%) and ensures a complete mixing at 4D (VC< 2%).

A minimal pressure drop

The Oxynator ensures a lower pressure drop than static mixers.

Ex: for $P_{inlet} = 3$ bar

- $\Delta P = 60-120$ mbar for O_2 flow
- $\Delta P = 1-5$ mbar for process air

- *Complete mixing within 4D*
- *Minimal pressure drop*
- *Easy to install*
- *No maintenance*
- *No moving parts*
- *Industrial operations from 1 to 400 t/d O_2*
- *Design available for any gas and quantity*

