

# AYRAVal™ Ammonia



Air stripping units for the recovery of nitrogen (N) from industrial and municipal wastewater washing



John Cockerill



# Stripping units contributing to circularity and improved carbon and economic balances



## AyraVal™ Ammonia : a high-performance solution for nitrogen recovery

Perfectly in line with a circular economy approach, our **AyraVal™ Ammonia** plants lighten the nitrogen load of industrial or municipal water treatment plants (WWTPs). The nitrogen is recovered in the form of a dissolved ammonium salt that can be used as a liquid mineral fertilizer in agriculture.

Our stripping units make these plants **less polluting (N<sub>2</sub>O release), less energy-intensive and therefore more efficient.**

Compared with conventional organic fertilizer spreading, the higher concentration of NF U-standard fertilizer produced by stripping **facilitates both storage and transport, and enables precise application without olfactory nuisance.**

Our nitrogen stripping systems help to reduce nitrogen pollution of groundwater and watercourses, reduce soil nutrient overload and improve the carbon and economic balances of WWTPs.



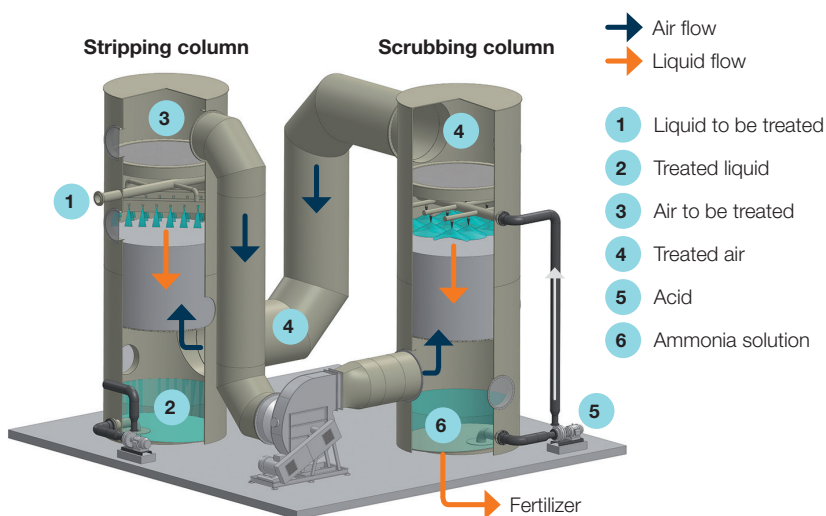
**Reducing environmental impact:**  
By recovering nitrogen our **AyraVal™ Ammonia** stripping units **avoid the emission of nitrous oxide (N<sub>2</sub>O), a gas with a very high greenhouse effect.**

## AyraVal™ Ammonia : compact and energy-efficient solutions

They consume **20% less soda, than other solutions on the market.**

In addition to saving operating costs, this low reagent consumption limits its carbon footprint and environmental footprint.

## AyraVal™ Ammonia : operating principle



The ammonia initially contained in the effluent or liquid fraction is transferred to the air.

The ammonia in the air is then absorbed into the washing liquid, where it is neutralized in the form of dissolved ammonium salts.



### The fertilizer obtained through nitrogen valorization meets:

- the nitrogen and sulfur needs of many crops (cabbages, onions, celery, leeks, cereals, sugar beets, corn...),
- to the specifications of French standard NF U 042-001.

### John Cockerill Air & Gas

environment@johncockerill.com

#### France :

ee.environment@johncockerill.com

Tel. : +33 (0)3 89 37 41 41

#### Canada :

environment.canada@johncockerill.com

Tel. : +1 450-696-4000

#### Hungary :

environment.hungary@johncockerill.com

Tel. : +36 (0) 93 519 045

Follow us on

**Linked in**

