

Who is CNP?

CNP stands for Carbon, Nitrogen and Phosphorus. CNP - Technology Water and Biosolids Corporation designs and supplies nutrient recovery and biosolids treatment optimization systems. Led by an experienced team of wastewater industry veterans, CNP continues to pioneer innovative wastewater systems solutions that positively impact the operational costs of treatment plants worldwide. CNP's key technologies are AirPrex® and CalPrex®, phosphorus recovery technologies, and PONDUS, a Thermo-Chemical Hydrolysis Process (TCHP). CNP is a division of Centrisys Corporation and headquartered in Kenosha, Wis.

CalPrex®

The CalPrex process harnesses the acidogenic bacteria power to acidify bio-P sludge. Over 60% of phosphorus solubilizes in the acid phase digestion process. Dewatering acidogenically digested sludge isolates the dissolved phosphorus (orthophosphates) in the centrate. The centrate is sent to the CalPrex reactor, where orthophosphates are precipitated by calcium hydroxide. By maintaining a pH solution of 6.5 or below, phosphorus is recovered as brushite ($\text{CaHPO}_4 \cdot 2\text{H}_2\text{O}$), a market-ready, high-quality fertilizer.

AirPrex®

AirPrex turns struvite into an opportunity for resource recovery and installs between the anaerobic digester and the dewatering equipment. AirPrex converts the orthophosphates in digested sludge to struvite ($\text{MgNH}_4\text{PO}_4 \cdot 6\text{H}_2\text{O}$) by air stripping CO_2 and adding magnesium chloride. Struvite is another market-ready fertilizer. AirPrex reduces the phosphorus recirculation by 90%.

CalPrex® + AirPrex®

The combination of CalPrex + AirPrex captures 50%+ phosphorus entering treatment plants, with a minimal addition of chemicals.

PONDUS (TCHP)

CNP has exclusive North American distributorship of PONDUS, a Thermo-Chemical Hydrolysis Process (TCHP). The process also reduces sludge volume and polymer consumption. Steam is not necessary, making PONDUS a cost effective solution for treatment plants ranging in size from 10 mgd to 160 mgd. A treatment plant using PONDUS can expect a 25-30% increase in methane production compared to a plant not using PONDUS' innovative technology.

Lipp GmBH

In 2017, Centrisys/CNP became the exclusive North American distributor of Lipp GmBH, a digester and storage tank manufacturer.

Passavant® Variable Inlet System hydrograv® adapt

In 2018, Centrisys/CNP became the exclusive North American distributor of Passavant® Variable Inlet System hydrograv® adapt, an inlet system that adjusts loading to fluctuations in a secondary clarifier.

Corporate

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North America | South America | Europe | Middle East | China



CNP at a Glance

Installations

- 2018 – First North American AirPrex installations complete by the end of the year: Liverpool WWTP in Medina, Ohio and Little Patuxent Water Reclamation Plant - Howard County in Savage, Maryland
- March 2017 – CNP acquires CalPrex global licensing and distribution
- 2014 – First North American PONDUS installation at Kenosha WTP in Kenosha, Wis.
- 13 AirPrex global installations
- 8 PONDUS global installations

Awards

- 2019 Frost & Sullivan Product Leadership Award for the North American Sludge Treatment (PONDUS)
- 2018-19 CalPrex Tailored Collaborative Research (TCR) with The Water Research Foundation (WRF)
- 2018 Utility of the Future Today Recognition Program for the Kenosha WWTP Optimization Project (PONDUS)
- 2017 W&WD Top Project for the Kenosha WWTP Optimization Project (PONDUS)
- 2017 ACEC Grand Award for the Kenosha WTP Energy Optimized Resource Recovery Project (PONDUS)
- 2016 U.S. Environmental Protection Agency (EPA) Nutrient Recycling Challenge Award (AirPrex)
- 2015 Green Tec Award (AirPrex)

Company Leadership

- Gerhard Forstner, CNP North America President
- Michael Kopper, C.E.O. and Founder of Centrisys
- Menachem Tabanpour, V.P. of Business Devel.
- Zhongtian (John) Li, Ph.D., Technical Manager
- Joseph Hughes, P.E., Project Manager
- Patrick Mullen, Project Manager

Facilities & Locations

- CNP North America - Kenosha, Wisconsin
- CNP Cycles - Hanau, Germany



ISO 9001:2015

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