

Prayon Technologies

TRUSTED TECHNOLOGIES
FOR A SUSTAINABLE FUTURE

PRAYON TECHNOLOGIES BY PRODUCER FOR PRODUCERS

A leader in the licensing of phosphoric acid and phosphate production processes

Prayon Technologies, the Licensing division of Prayon, is **internationally renowned for its outstanding technologies** in phosphate production. If you are planning to build or extend your phosphate plant, Prayon Technologies is the best partner to support you in the design, development and construction of your asset.

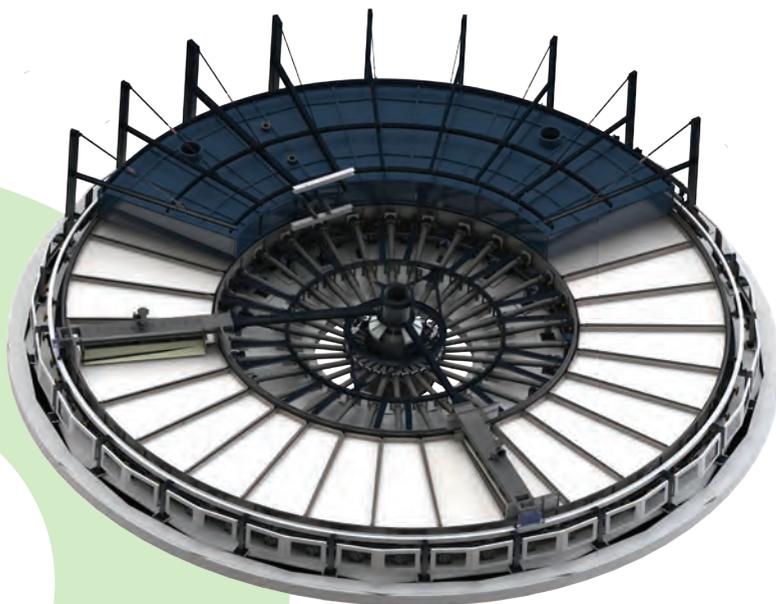
“All improvements are first tested in our production plant before being deployed for our clients.”

— OVER 75 YEARS' EXPERIENCE

An integrated solution provider

- Prayon's unique **expertise** and **techniques** in phosphate and phosphoric acid production
- **Consulting services, training and assistance** in phosphate production and associated technologies
- Innovative phosphate technologies for **sustainable processes**

	More than References	130
	In over Different countries	30
	More than Validated phosphate rocks	65
	More than Processes	20



Leveraging synergies

Benefiting from the **Prayon Group's experience** in industrial production is another good reason to partner with Prayon Technologies. Moreover, you can count on the robustness and enduring design of our **PROFILE proprietary equipment** for long-term efficiency, especially the Prayon tilting pan filter, the market benchmark for filtration equipment.

Our Technologies make the difference

Prayon offers the widest portfolio of technologies in the phosphate market with proven performance:

Processes & services here



Phosphoric acid production

- + **DH:** Best-seller process
- + **HH:** Water-saving process
- + **DA-HF:** Cutting-edge process for high recovery efficiency
- + **CPP:** State-of-the-art process for valuable phosphogypsum
- + **HH-DH:** High-recovery and low-energy process

Sustainability

- + **Upgraded rock Ecophos:** Modular HCl-based process to upgrade your raw material
- + **Upgraded rock GMP:** Modular H₂SO₄-based process to upgrade your raw material
- + **Spent acids:** Innovative process solution to turn your waste acid stream into a valuable product
- + **Secondary P-sources:** Process solution to turn your P-residues, sewage sludge, fly ashes, tailings or slimes into a valuable product

Feed phosphate production

- + **DCP Feed Ecophos:** Modular HCl-based process to produce feed-grade DCP from low to high grade rock
- + **DCP Feed GetMoreP:** Modular H₂SO₄-based process to produce feed-grade DCP from low to high grade rock
- + **MCP Feed:** Production of feed-grade MCP from phosphoric acid or from DCP

Gas treatment

- + **Gas Scrubbing:** Integrated scrubbing process embedded in the plant to maximize gas cleaning efficiency
- + **Fluorine recovery:** High-performance process to capture fluorine from gases

Phosphoric acid purification

- + **Membrane Technology Puma:** A new generation of phosphoric acid purification process
- + **Desulfation:** Robust process solution to remove sulfates from phosphoric acid
- + **Heavy metals removal:** Variable process solutions to selectively remove heavy metals from phosphoric acid

Innovation for successful solutions

Because we believe that innovation is a must to address present and future planetary challenges, we **imagine, test, validate** and **industrialize** innovative processes from lab to factory.

To support the technologies and validate our customers' projects, Prayon has unique R&D centers, pilot plants and a demonstration plant.

Our technologies are protected by worldwide patents offering our customers licenses and full process performance guarantees. We partner with a short list of world-class General Licensees to ensure the success of your projects.

By your side from project start-up to plant commissioning and beyond, we provide you with bespoke solutions to ensure seamless, efficient, and on-time delivery.



Training

Our comprehensive process and plant control training is a real must to enhance **operational excellence** and **safety** on your plant.

To experience the full reality of the process, our Phosphoric Acid Virtual Plant Simulator is the perfect **interactive training** tool for your staff.



Technical Surveys

Prayon's extensive **experience** in the phosphate world makes it the **perfect partner** to audit your existing plants (covering all processes, whether from Prayon or another supplier) and reach your objectives.



Data Management and Plant Optimization

With our **P2Gether assistance program**, we will elevate your existing phosphoric acid plant out of its comfort zone to a **level of excellence** in a reasonable timeframe and investment cost.



Our global presence



The strengths of Prayon Technologies



Profitability

Most efficient and profitable technologies with unique designs.



Production Oriented

Technologies and equipment tested at our production facilities.



Innovation

Thanks to our R&D departments and our Excellence Center, we deliver top-of-the art technologies for the future.



Worldwide References

Trusted all over the world.



Flexibility

Prayon Technologies designs plants achieving excellent results and operating successfully with a wide range of raw materials:

- High to medium grade phosphate rock;
- Low-grade phosphate rock;
- Dry phosphate or phosphate slurry;
- Secondary P-sources;
- Pure or diluted sulfuric acid;
- Hydrochloric acid.



Sustainability

We join forces for a circular economy model:

- Design of **zero effluent** plants;
- Recycling and use of **low-grade rock**;
- **Reduced consumption of utilities and resources**;
- **P-recycling** from sewage sludge ash and **valorization of co-product** and waste.



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