



32% Hydrochloric Acid

PRODUCTION PLANTS

Engineering at service
of sustainability

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KERN SD

develops on-site hydrochloric acid production facilities tailored to meet the technical and economic needs of customers.

KERN SD plants are fully customizable in terms of production and concentration.

The overall reaction of the process is:



- KERN SD KERN SD has an **innovative technology** for the production of **high quality Hydrochloric Acid synthesis** from chlorine and hydrogen.
- Plants designed and developed by KERN SD use safe, environmentally friendly and highly competitive technology due to their low investment and low operating costs (high electrical efficiency and degree of automation).
- KERN SD technology complies with the **EU Best Available Technologies (BAT) Directives** for the production of chlor-alkali (Directive 2010/75/EU).

TECHNICAL SPECIFICATIONS OF THE PRODUCT (HCl)

Appearance	Colorless
Melting point	-25 °C
Boiling point	87 °C
Density	1,19- 1,195 (20° C) g/cm ³
Molar Mass	36,46 gr/mol
Water solubility	Soluble



Hydrochloric Acid Production Plants

PLANT FEATURES

Output	From 1,4 to 150 Tn/day (at 100%)
Flexibility	50-100%
Concentration	32%
Materials	Built with high quality materials
Monitoring	Fully automated and monitored plants

- **ON-SITE PRODUCTION**
- **FIXED PLANTS**
- **MODULAR AND SCALABLE**
- **AUTOMATIC CONTROL**
- **SAFE OPERATION**
- **ECONOMIC SAVINGS** (low operating and maintenance costs)
- **HIGH ENERGY EFFICIENCY**
- **SIGNIFICANT REDUCTION** of associated storage, handling and road transport risks
- **HIGH PURITY PRODUCT**
- **NO ENVIRONMENTAL IMPACT**

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SOME APPLICATIONS

OF HYDROCHLORIC ACID

- Chemical synthesis of organic chlorides - production of agrochemicals and polymers such as PVC
- Chemical industry - production of inorganic chemicals used in water demineralisation process, as a titrant and in chemical analysis (reagent)
- Petrochemical industry - activation of oilfields
- Pharmaceuticals - regulating acidity in solutions
- Food industry - additive in the manufacture of gelatine and other sugars, for flavour enhancement
- Textile industry - leather tanning process