

CHEMICAL PLANTS

High-head pumps for chemical processes

Continuous process feed, solvent circulation and liquid transfer.
Pump, materials, seal and drive matched to your liquid.



1,050 m

head in one stage (3,445 ft)

**USD
28,000**

a year saved on electricity at
the Daqing ammonia workshop

**Daqing Oilfield Chemical
Jingbao Xinao Chemical**

are among our chemical-plant customers

WHERE EHIK FITS

High head for feed, circulation and transfer

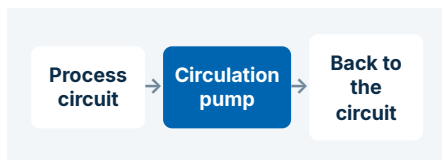
A high-pressure process does not always need a large flow. EHIK matches the pump to what each liquid circuit needs.



MAIN APPLICATION

Continuous process feed

Feed liquid into a process that is under pressure. Our urea hydrolysis installation is an example.



Solvent and process-liquid circulation

Keep liquid moving around the circuit at the flow and head you need, for example in natural-gas purification.



High-head liquid transfer

Our selection includes vessel pressures, height differences and piping losses.



PROCESS FEED

Urea hydrolysis feed

EHIK pump sets connected directly to the process pipework, feeding liquid into a process under pressure.

High head in one stage

A rotor and a fixed pickup tube create high head in one stage. The flow is continuous, with no back-and-forth strokes.

Matched to your liquid

Composition, concentration, temperature and contaminants decide the materials and the seal, not the chemical name alone.

A seal on the inlet side

The mechanical seal sits at the inlet, away from the high-pressure discharge. It is selected for the actual chemistry, temperature and inlet pressure.

One supplier

Bare-shaft pump, complete pump set, or a skid with instruments, valves, pipework and controls.

FIELD EXPERIENCE · DAQING OILFIELD CHEMICAL GROUP

Two workshops, two pump replacements



Methanol workshop · EHIK pump in service after the 2009 replacement.



Synthetic ammonia workshop · the EHIK pump that replaced a 75 kW (101 hp) multistage pump in 2010.

METHANOL WORKSHOP · 2009

Stable delivery after a multistage pump replacement

The old multistage pump had severe cavitation, often lost prime and delivered an unsteady flow. EHIK replaced the pump in 2009, and delivery was stable after the change.

SYNTHETIC AMMONIA WORKSHOP · 2010

Lower electricity cost

EHIK replaced a multistage centrifugal pump with a 75 kW (101 hp) motor. Our project records show that the plant saved over USD 28,000 a year in electricity after the change.

30 → 15 kW

Methanol pump motor, 40 → 20 hp

Over USD 28,000

a year saved on electricity, ammonia workshop

RETROFIT REFERENCE

New pump sets, existing process pipework

In 2023–2024, EHIK replaced multistage pumps at Jingbao Xinao Chemical. The installed pump sets connect with the plant's process pipework, valves and instruments.



Pump installation at Jingbao Xinao Chemical.



A closer view of the pump, drive and process connections.

A plant upgrade must fit both the operating requirements and the space. We plan the operating conditions, connection positions, drive footprint and operating access together. Our outline drawings show nozzle positions, motor footprint and access space before delivery.



RONGXIAN NATURAL GAS PURIFICATION PLANT · 2016

Solvent circulation

The new solvent-circulation pump saved more than 500 kWh of electricity a day.

SELECTION

Flow and pressure are only the start

The liquid data and operating range decide the materials, mechanical seal, drive and supporting equipment.

Composition and concentration

The main liquid, dissolved chemicals, contaminants and changes in concentration between production and cleaning decide the material and seal.

Inlet and vapor pressure

Feed-vessel pressure, liquid level and suction pipework decide the inlet conditions. This is important for hot liquids or liquids that vaporize easily.

Control and operating range

Minimum, normal and maximum flow, pressure control and startup needs decide the pump and controls. Precise dosing needs a separate assessment.

Temperature and viscosity

Normal and startup temperatures and viscosity affect pump selection, motor load and seal conditions.

Particles and crystallization

Solids, deposits and crystals that form when the liquid cools or the pump stops affect wear and sealing.

Materials, seals and site

Our proposal covers materials, seal, motor and site connections, and follows your plant's equipment requirements.



SEAL SUPPORT

A seal on the inlet side

The mechanical seal sits at the inlet, away from the high-pressure discharge. Single or double cartridge seals; API seal plans (such as Plan 52 or 53) on request.

QUESTIONS

Before you specify the pump

Can you select materials from the chemical name alone?

No. Composition, concentration, temperature and contaminants affect the material and seal. EHIK helps you check these.

Can a pitot tube pump replace a metering pump?

Continuous delivery and precise metering are different needs. EHIK checks the pump and controls against your process.

How are hot or volatile liquids considered?

Liquid temperature, vapor pressure, supply-vessel pressure and level, and suction-line layout affect the inlet conditions and seal support. EHIK considers startup and shutdown as well as normal operation.

Do I need a complete specification first?

No. Send any liquid properties, flow or pressure you know. We reply within 1 business day and help develop the selection.

We also supply pickup tubes and rotor assemblies, with drawings to confirm the right spare part.

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Send us your liquid, flow and pressure.

We reply within 1 business day.

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