ALDRICH

PLEUGER

ALDRICH Reciprocating Pump Units
Industrial Solutions & Related Services

PLEUGER

ABOUT ALDRICH

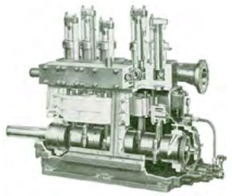
ALDRICH by PLEUGER is a leading manufacturer of Reciprocating Pumps and systems. Thousands of installations worldwide perform reliably in various applications and developed to an indispensable part in multiple industries. Our customized solutions are trusted throughout the world in oil and gas, mining, refineries, water, energy, offshore and onshore plants, and general industries. Founded in 1929, PLEUGER has continuously designed and developed submersible pumps and motors, marine propulsion systems, and reciprocating pumps to the highest of industry standards. As a manufacturer, PLEUGER Industries offers ALDRICH units, Spare parts, and Services for global customers. Our products perform even in the most extreme and harshest of environments. That's why the ALDRICH and the PLEUGER brands are renowned worldwide for quality and reliability.

ALDRICH RECIPROCATING PUMPS – A BRIEF HISTORY

ALDRICH MILESTONES

- Founded in 1902, division of Allentown Rolling Mills
- 1916 - direct drive for reciprocating pumps
- 1918 - high-speed pumps with 120 rpm crankshaft speed
- First in building Quintuplex Pumps
- 1939 - crankshaft operating speeds of 225 rpm
- Development of porcelain plungers
- First in developing Septuplex & Nonuplex Pumps
- Developed synchronized suction valve unloaders
- IP owned by PLEUGER since its tranfser from Ingersoll-Dresser and Flowserve in 2018

ALDRICH Reciprocating Plunger Pumps are inherently designed for reliable high-energy, heavy-duty service in specialized applications. Meeting API 674 design and performance criteria, each pump is engineered to provide continuous-duty operation over a 20-year design life. Offering a wide variety of hydraulic, mechanical, and materials options, ALDRICH Reciprocating Plunger Pumps can be constructed to meet the specific characteristics of the most demanding applications, including abrasive slurries and high viscosity liquids. This results in maximum operating flexibility with minimum life cycle costs.

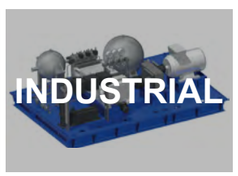


MARKETS & INDUSTRIES

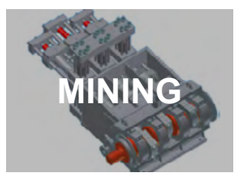
Typical Applications

- Fatty Acid
- Fertilizer
  - Ammonia
  - Carbamate
- Reactor Feed (multiple chemicals)
- Detergent Production

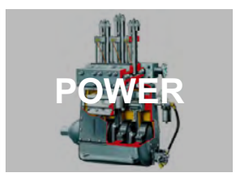
- Crude oil Transport
- Slop Oil Transfer
- Methanol Injection
- MEG / TEG Gas Drying
- LPG / NGL Injection / Export
- Secondary Oil Recovery:
  - CO2 Injection
  - Steam flood
  - Saltwater injection
- Hot Oil Services



- Reverse Osmosis
- Hydrotest
- Descaling
- Forging Press
- High Pressure Cleaning / Blasting



- Dewatering
- Slurry transport
  - Iron / Nickel Ore
  - Copper Concentrate
  - Coal
- Hydraulic (high pressure water) Ore removal



- Charge [Nuclear PWR]
- Boiler Feed (small boilers)
- Start-up / Standby Boiler Feed (large boilers)
- Hydro test
- Seal Injection

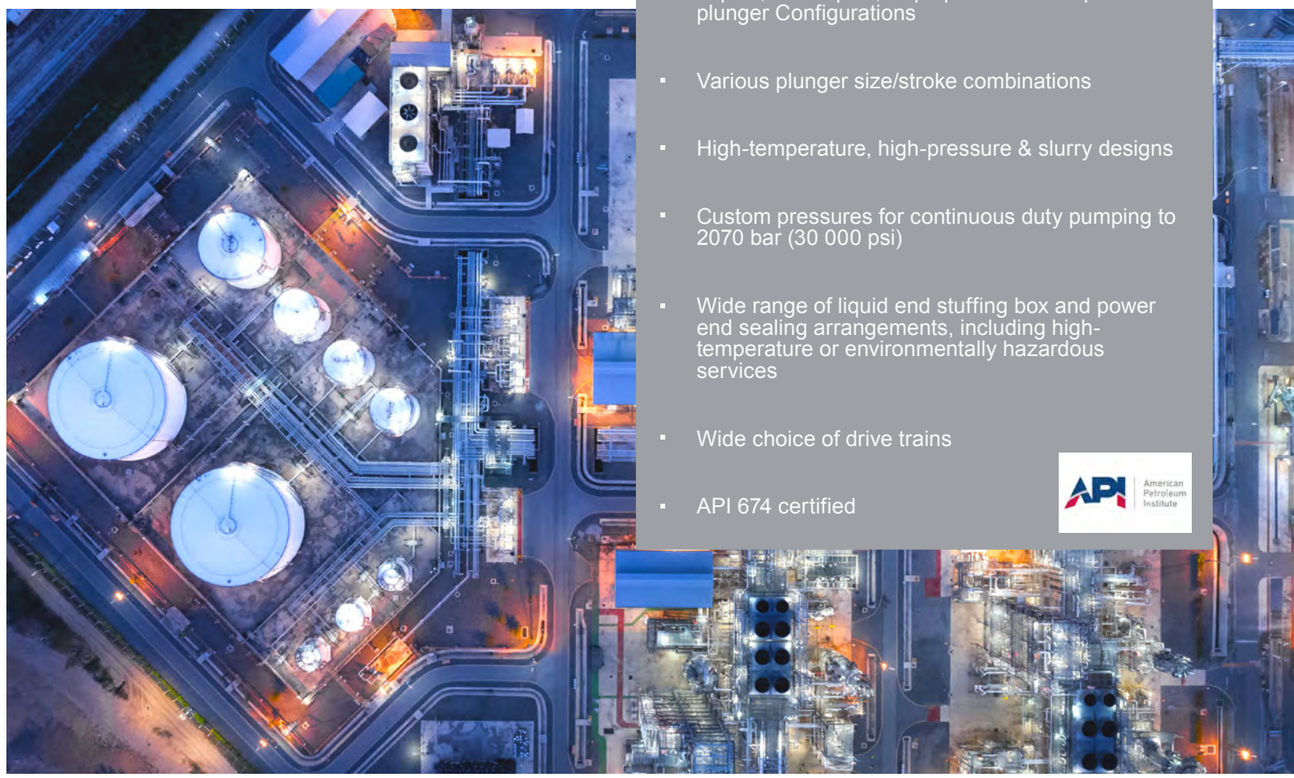
ALDRICH RECIPROCATING PUMP UNITS

The ALDRICH engineered Reciprocating Pumps offer users a wide range of options to customize a solution for mission-critical pumping needs.

The ALDRICH Reciprocating Pump product line provides maximum operating flexibility. Available in horizontal and vertical configurations and customer specific materials. ALDRICH reciprocating pumps are engineered individually to meet the application's specific performance and installation requirements while reducing maintenance and replacement costs.

WHEN TO USE A RECIPROCATING PUMP

- High pressure with low flow
- Variable flow with constant pressure
- Constant flow with variable pressure
- High efficiency required



Key Features

- Vertical and horizontal configurations
- Sectionalized or monobloc liquid ends
- Triplex, Quintuplex, Septuplex and Nonuplex plunger Configurations
- Various plunger size/stroke combinations
- High-temperature, high-pressure & slurry designs
- Custom pressures for continuous duty pumping to 2070 bar (30 000 psi)
- Wide range of liquid end stuffing box and power end sealing arrangements, including high-temperature or environmentally hazardous services
- Wide choice of drive trains
- API 674 certified

MAIN ADVANTAGES

Reciprocating Pumps

- Fixed flow per revolution
- Flow is independent of pressure
- Pressure is independent of flow
- High efficiency

Centrifugal Pums

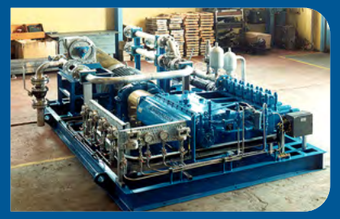
- Varying flow per revolution
- Flow is pressure dependent
- Pressure is flow-dependent
- Low efficiency

5,500+ ALDRICH PUMP INSTALLATIONS IN 60+ COUNTRIES

Location Scotford Upgrader, FT.Saskatchewan
Catalyst Transport Oil Pump
Temp 297 °C
Pressure 246 bar
Customer SHELL Canada
Pump type 3 units - 5 x 7HV3
Speed 123 rpm
Capacity 40 m3/h

Location Asgard A, Northsea
3-stage stuffing box
Temp 1 °C
Pressure 480 bar
Customer Statoil
Pump type 7V3
Speed 210 rpm
Capacity 40 m3/h

Project Karachaganak Petroleum Operating b.v.
Water injection systems for natural gas production
Temp 68°C
Pressure 318 bar
Customer KPO, Kzakhstan
Pump type 3 units 3.625 x 7V3
Speed 186 rpm
Capacity water reinjection



Location Greece
Motor and turbine driven
Temp 15 – 25 °C
Pressure 82,7 bar
Customer METEK SA
Pump type 5HS5
Speed 320 rpm
Capacity 72 m3/h

Location Malaysia
Liquid Crude Oil and water
Service Close drain transfer
Pressure 30 bar
Customer Hibiscus
Pump type 2.75 x 3HS3
Speed 230 rpm
Capacity 11m³/h
Power 10,3kW

Location UK NORTH SEA
triangular baseplate / angle gear
Temp 27.5 °C
Pressure 621 bar
Customer BP Etap
Pump type box 9V5
Speed 154 rpm
Capacity 52 m3/h

MAJOR CUSTOMERS

KNPC · ExxonMobil · bp · Karachaganak · aramco · Shell

ALDRICH PLEUGER

ALDRICH RECIPROCATING PUMP UNITS

RELATIONSHIP DRIVEN SERVICE, EXCEPTIONAL SUBJECT MATTER EXPERTISE, DELIVERED AROUND YOUR NEEDS.

The ALDRICH support services cover all aspects of support and consultancy that might be needed during your installation's life cycle. ALDRICH Pumps are designed for extended service life, often running for decades. If you need spare parts for your ALDRICH product or system, you can obtain these quickly anywhere in the world.

SPARE PARTS

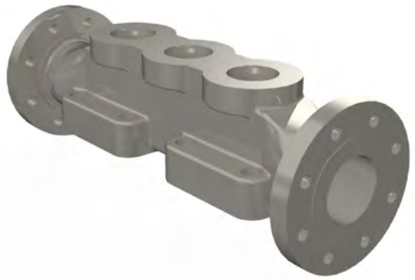
- Readily available parts for regularly scheduled maintenance and emergency callouts
- Latest standards
- Guaranteed quality and performance
- Stock and manufacture spare parts for heritage pumps no longer produced but still operational

REFURBISHED PARTS

- Accredited inspections to refurbish where viable
- Core pump components such as casings, hydraulics, and electrical parts will be refurbished

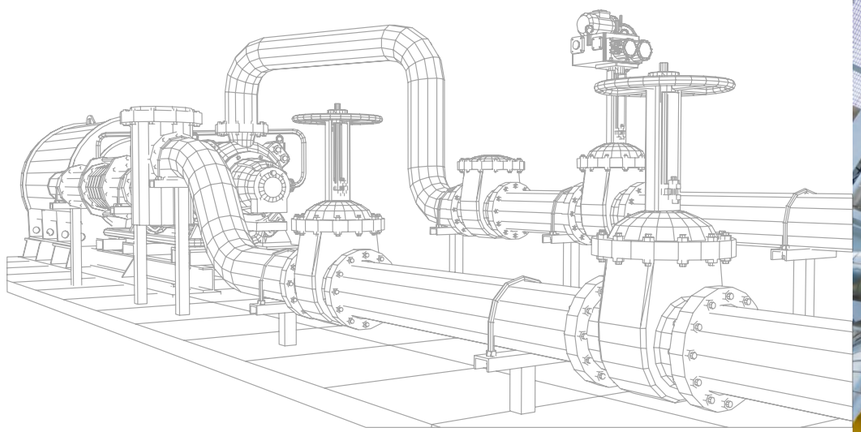
REVERSE-ENGINEERED PARTS

- Accredited inspection procedures
- Re-engineering where different performance is required
- Obsolete parts from other reciprocating manufacturers
- State-of-the-art scanning and computer modeling capabilities ensure any reverse-engineered product meets or exceeds the original specifications.



KITTING SERVICES

We can supply many component replacements in kit form, making it easy to purchase, ship, service, and remove the need for pre-assembly.



REPAIRS & OVERHAULS

ALDRICH's repair facilities provide world-class support through our international master service centers as well as our service partner network. Our professional and highly skilled staff are ready to support anywhere in the world.

Reciprocating Pumps, due to their nature of the operation, can require considerable spare parts stock for routine maintenance, power-end, and liquid-end components.

These typically consist of:

- O-Rings for all liquid end metal to metal face seals
- Stuffing box packing, plungers, and bushes
- Valve components and assemblies
- Crosshead extension rod seals (for horizontal pumps)
- Crankshaft seals
- Inspection cover gaskets

Components required for a complete pump overhaul typically include

- Pull/side rods [vertical pumps]
- Liquid cylinder gaskets [vertical pumps]
- Power end bearings [horizontal and vertical pumps]

EQUIPMENT LIFE EXTENSION

Recognizing that plants are being operated beyond their original design intent, we offer our customers Equipment Life Extension reviews to validate the continued operation of plant equipment past the original design life.

SYSTEM EXTENSION

ALDRICH can provide different solutions to upgrade your system, e.g., electrical control, motor protection, soft starter, to improve service intervals and extend the lifetime.

REPLACEMENTS

We offer replacements and rebuilds of existing reciprocating pump units.

UPGRADES

PERFORMANCE. EFFICIENCY. LIFETIME EXTENSION. ALDRICH upgrades ensure the ongoing performance and reliability of your equipment, and we help protect the value of your assets through upgrades to minimize capital expenditures and maximize performance and reliability.

Upgrade capabilities

- Component material and design upgrades
- Performance increase upgrades
- Extended service intervals
- Complete revamps

ENGINEERING SERVICES AND SYSTEM CONSULTANCY

Our Engineering department is on hand to help you with your engineering challenges, including feasibility studies, design proposals for new installations or plans to remodel, expand or upgrade existing reciprocating pump systems.

ON-SITE SUPPORT AND INSTALLATION

As the reliability experts in reciprocating pumps and motors, we provide sound engineering expertise and specialist advice.

INTERNATIONAL SERVICE TEAM

- Installation planning and on-site support at customer sites
- Project management
- Supervision of installation to start-up and commissioning
- Extensive training at our service centers

We recommend using PLEUGER field service technicians to ensure all the connections and control systems are set up correctly for a stable and reliable operating system from the outset.

INSTALLATION AND SUPPORT CAPABILITIES

- Installation supervision and planning
- Inspections
- Installation supervision
- Start-up and commissioning support
- Worldwide support and project management

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DEDICATED SUPPORT TEAM

Committed to solving problems and reducing downtime,
the dedicated ALDRICH Care support team are there for you 24/7.

INVESTMENT IN PEOPLE

We invest in the development of our staff through continual professional education in areas such as health & safety, engineering, and project management. Our commitment is to both developing the individual and continual improvement of our customer service.

CERTIFIED MANAGEMENT SYSTEMS

We work to the highest quality assurance standards throughout the entire product life cycle, including ISO 9001

THE RELIABILITY EXPERTS FOR ALDRICH PUMP AND MOTOR SYSTEMS

ADVANTAGES OF THE ORIGINAL ALDRICH SERVICES

- Experts in reliability of pump systems
- Decades of market / application experience including Oil & Gas, mining, water and general industries
- Dedicated support team
- Global reputation for reliability and committed to maximising the reliability and availability of customer equipment
- Worldwide network of support partners
- Equipment installed in over 100 countries

ALDRICH RAPID ENQUIRY & QUOTE SERVICE

OUR DEDICATED SUPPORT TEAM IS THERE FOR YOU

For fast response and comprehensive quote please provide us With the following details:

- Equipment type
- Serial Number
- Part Description

We will contact you as soon as possible.

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