



PUMPS & PUMPING SYSTEMS

FOR THE CHEMICAL PROCESSING &
HEATING & AIR CONDITIONING INDUSTRY



THE ROTH SOLUTION PROVIDES:
Lowest NPSHr - Lower Motor Speeds
Lower Tank Heights - Reduced Maintenance

ROTH PUMP COMPANY TOLL FREE 1-888-444-ROTH

THE ROTH SOLUTION

Your System's Success begins with Roth...

You need your pumping system to be right the first time and stay that way. Design quality, reliability, long life and low maintenance into your system with Roth. From design engineering, customer service, quality assurance, on-time delivery, performance and reliability, Roth is the respected name in pumps and pumping systems.



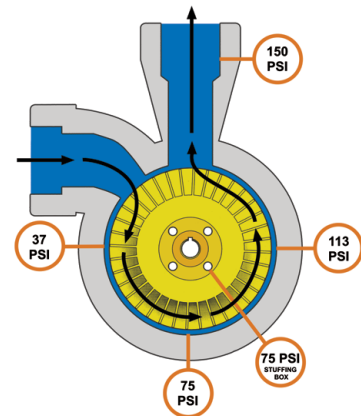
About the Roth Pump Company...

Since 1932, Roth Pump Company has been at the forefront in developing innovative, high quality pumps and systems. Recognized for its technical excellence, comprehensive customer support, and exacting manufacturing standards, Roth has become a global provider of highly reliable pumps and pumping systems. Roth has maintained the engineering edge in delivering technically superior pumps that result in lower installed cost and lower maintenance costs. When you install a Roth system, you're installing superb performance, unmatched quality and rock-solid reliability. You're installing success.



Install Roth Pumps and Pumping Systems and you'll install Quality...

At Roth, we build in quality with every step. Inside most Roth pumps, you'll find self-centering impellers to reduce wear and extend operational performance with reduced maintenance and less down time. Roth pumps are designed for easy seal maintenance and lubrication. Some customers have had their Roth pumps in continuous operation for over 30 years.

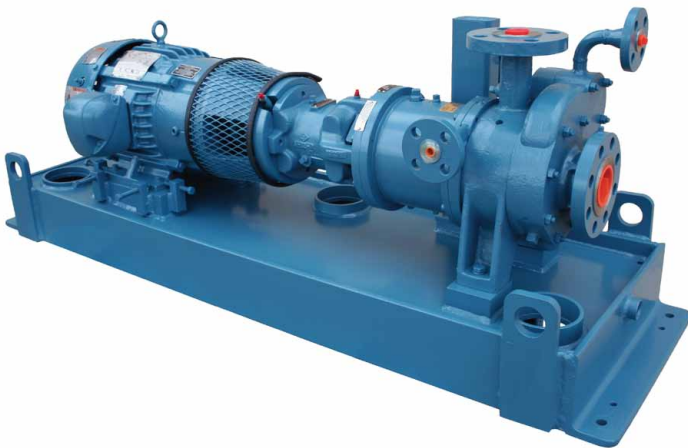


Install Roth Pumps and Pumping Systems and you'll install Performance...

Roth simplifies your planning and design engineering with pumps that require low NPSH. And even if low NPSH is not required, Roth pumps, with low NPSHr, make engineering and design easier. They provide lower installed cost since certain models only require about 1 ft. (0.30m) static suction head to simplify piping requirements and lower suction tank elevation. Cavitation is eliminated since there is no large low pressure area in Roth pumps. Roth pumps deliver high output pressures while operating at low operating speeds and with smaller HP motors. All this means better performance, lower operating costs and much simpler maintenance when you use a Roth pump.

Install Roth Pumps and Pumping Systems and you'll install Reliability

Avoid costly equipment replacements and repairs with the unmatched reliability that's built into every Roth pumping system. We build our pumps with the highest quality materials and engineer them to last. Roth has pumps installed today that are still doing their job after many years of service. Roth pumps are tested at the factory to ensure compliance with specifications. Chemical pumps can be factory tested with ammonia or propane, down to performance with 1 ft. (0.30m) NPSHa of the liquid pumped.



The Roth Solution...

Let Roth help you solve your pumping problems. The Roth solution provides low NPSHr which means:

- **Lower design costs**
- **Reduced construction costs**
- **Lower operating costs**
- **Moving liquids that are near or at their boiling points without cavitation**

Contact your local Roth representative or call the factory to find out how the Roth Solution can work for you.

The Roth Performance...

Roth Company 80 year history - ongoing commitment to product improvements, customer service and solving customer problems.

Roth Company engineering (design, testing and patents) - producing products with better performance, longer life and easier maintenance.

Roth Company experience (low NPSH, liquids at or near their boiling point, factory testing) - delivering products to meet the most demanding requirements at lower initial and lower ongoing costs.

Roth Company Specifications (lowest NPSH, motors with lower HP running at slower speeds, higher head pressures) - providing better efficiency, less wear and tear on bearings and seals, lower installed costs, lower maintenance costs.

Call and let us tell you more about how the Roth Solution can help you in your pump selection.

HEATING & AIR CONDITIONING INDUSTRY



212°F (100°C) Condensate Stations / Boiler Feed Systems

Roth 212°F (100°C) condensate stations provide full capacity return of steam condensate to the boiler or deaerator, even with leaking traps and boiling water conditions. All stations are supplied with Roth patented low 1 ft. (0.30m) NPSH pumps. Low silhouette design permits full drainage of low return lines. These Roth pumping stations will handle up to 190 GPM (43.2m³/hr) and heads to 175 ft. (53m) 75 lbs. (5 bar), TDH at 1750 rpm while requiring only 1 ft. (0.30m) NPSH. Higher discharge pressures can be provided with 3500 rpm motors. Simplex and Duplex units are available.

Request Bulletin C204

Roth also provides complete boiler feed systems.

Request Bulletin B201



Condensate Transfer Stations

Roth Transfer Stations are equipped with submerged pumps that collect hot condensate from low return lines and return it efficiently at rates of 3 to 60 GPM (.7 - 13.7 m³/hr). A variety of motor and receiver sizes allow selection of the right transfer station for your applications. For condensate up to 200°F (93°C), sizes from 500 to 15,000 pounds per hour (227 to 680 kg/hr) evaporation and discharge pressures from 10 to 60 psi (0.7 to 4.1 kg/cm²) (4.0 bar) are available. Steel or cast iron receivers can be supplied. Pumps are supplied with 416 stainless steel shafts with one piece bronze impellers. Motor speeds operate at 1750 rpm.

Request Bulletin 1H99

HEATING & AIR CONDITIONING INDUSTRY



250+°F (121+°C) High Temperature Condensate Return

Roth offers a full line of return stations equipped with ASME Code receivers that handle very hot condensate, 200°F to 250°F (93°C to 121°C), coming from absorption coolers, kettles and other equipment. Stations are equipped with Roth special design Hot Condensate pumps, which deliver 15 to 75 psi (1.0 to 5.2 bar) discharge pressure at 1750 rpm while handling 250°F (121°C) condensate at 1 ft. (0.30m) NPSH. Stations requiring 100 to 150 psi (6.9 to 10.3 bar) of discharge pressure are supplied with 3500 rpm motors. Low silhouette design provides 3 ft. (0.91m) vertical distance from cooler outlet to receiver inlet when mounted at the same level. Simplex and Duplex units are available. Units are also available for operation at 350°F (177°C) and 400°F (204°C). You can improve the overall efficiency of your heating or steam process system by returning higher temperature condensate to the boiler with a Roth pump system.

Request Bulletins A204, F204, P204

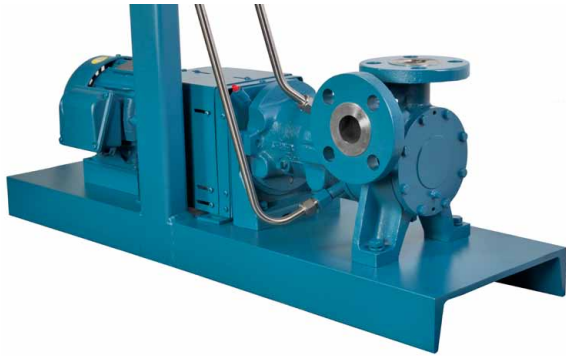


212°F (100°C) Underground Stations

Roth 212°F (100°C) underground stations handle multiple source condensate returning at various temperatures above and below boiling point where sub-floor returns are necessary. Capacity to 75 GPM (17 m³/hr), heads to 75 psi (170 m., 5.2 bar). These stations handle hotter condensate and develop higher pressures at lower motor speeds. Roth pumps are supplied with one piece impellers that provide 1 ft. (0.30m) NPSH while operating at motor speeds of 1750 rpm. Simplex and Duplex units are available with stainless steel or steel receivers in capacities up to 320 gallons (1211 liters). Units are also available for operation at 250°F (132°C) with ASME receivers.

Request Bulletins V204, U204

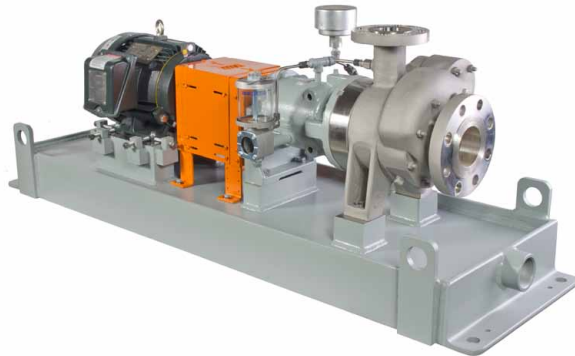
CHEMICAL PROCESSING INDUSTRY



Regenerative Turbine Chemical Pump

Roth regenerative turbine chemical duty pumps provide continuous, high pressure pumping of non-lubricating and corrosive liquids. These pumps are provided with one piece, machined self centering impellers for operation with a wide variety of chemicals with process heads up to 1400 ft. (427 m.), 600 psi (40 bar), TDH at 3500 rpm, NPSH from 3 to 14 ft. (0.91 to 4.2 m.), and temperatures to 450°F (232°C). A wide variety of mechanical seals are available. Front pull-out makes seal maintenance easy. Roth pumps are providing continuous, reliable service in many types of environments around the world, including offshore oil platforms, refineries, and chemical and industrial plants. Capacity 100 GPM (22.7 m³/hr).

Request Bulletin 1C99



Low NPSH Chemical Pump

Roth Low NPSH chemical pumps provide continuous, high pressure pumping of non-lubricating and corrosive liquids at only 1 ft. (0.30m) NPSH. These pumps are designed to pump a wide variety of chemicals including liquefied gases from 4 to 150 GPM (0.91 to 34m³/hr) with process heads up to 1600 ft. (448m) TDH, and temperatures from -150° to +450°F (-100° to +232°C). Front pull-out makes seal maintenance easy. The impellers in Roth pumps are machined from one piece of metal. A special inducer, provided in all Roth low NPSH pumps, is designed to function without cavitation when pumping liquids at or near their boiling point. These pumps are ideal for pumping liquefied gases.

Request Bulletin 1C99

CHEMICAL PROCESSING INDUSTRY



Low NPSH Sealless Magdrive Pumps

Roth offers sealless magnetically driven pumps, which require an NPSHr of only 1 ft. (0.30m) FULL CURVE. These pumps can produce any level of differential pressure to 1500 ft (450m) (this pressure is 900ft (225m) greater than centrifugal pumps) and capacities from 4 to 180 GPM (0.91 to 35m³/hr). Construction includes non-magnetic stainless steel or Hastalloy C parts for improved corrosion resistance and improved performance by reducing eddy currents. All bearing surfaces are provided with grooves to provide constant lubrication. High discharge pressure provides sufficient margin above vapor pressure to insure the fluid being pumped stays in its liquid phase as it passes through the magnetic drive. If you have environmental concerns, consider this pump.

Request Bulletin M105R3



High Pressure, Low NPSH, Multi-stage Chemical Pumps

Roth high pressure, low NPSH, multi-stage chemical pumps solve the most difficult pumping problems. These pumps can handle continuous non-pulsating differential pressures up to 2000 psi (141 kg/cm²) and up to 5400 ft. (1646m) TDH. They provide low NPSH and are quiet, too. Capacity 4 - 150 GPM (.912 to 34 m³/hr). The non-pulsating discharge pressure makes the Roth pump ideal for desuperheating operations. If you have a requirement to pump hazardous chemicals in tough environments, let Roth help you with the Roth Solution.

Request Bulletin A109

ROTH[®]

PUMP COMPANY



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Contact your Roth Representative Today!