Pressure Boosting
Multiphase Pumps boost production flow line pressure. This enables lower wellhead backpressure, resulting in increased production and total recovery. Leistritz standard units are packaged for operation in remote locations, and safely accommodate 100% gas for extended periods. VFD speed control maintains a constant inlet pressure regardless of the number of producing wells, and prevents low-pressure wells from being shut in.

Gathering
Multiphase Pumps improve the economy of remote or marginal fields by eliminating field separation, and transporting untreated well production to centralized process facilities in a single pipeline. This reduction in facilities also means less impact on the environment. It eliminates flaring of associated gas, and uses small-footprint equipment in place of large, satellite process facilities.

Sub-sea
Multiphase Pumps in sub-sea booster applications allow economic production of remote tieback wells, boost production of aging wells with declining reservoir pressure, and facilitate flow assurance by drawing down flow-line pressure. Depending on its location (wellhead, riser base, or in-between), a sub-sea booster pump provides an economical and predictable tool to increase total recovery, regardless of changing GOR or water cut.

Flow Assurance
Multiphase Pumps are excellent tools to deal with flow assurance issues. The mitigation of hydrates by drawing down the line pressure below the hydrate formation point prevents blockage and saves inhibitor costs. Oil/water emulsions can be pumped with minimum shear and agitation facilitating emulsion breakup. Surging and slugging, which can be problems in offshore risers and cause upsets in the production separator, can be avoided by using a multiphase pump on the receiving end.
Pump Series: L4MK
- Maximum Flow Rate: 220,000 bpd
- Maximum Differential Pressure: 360 psi
- Maximum GVF: 100 %*

Pump Series: L4HK
- Maximum Flow Rate: 440,000 bpd
- Maximum Differential Pressure: 1500 psi
- Maximum GVF: 100 %*

* Liquid recirculation required.

Leistritz Design Features
- Single piece rotors with large root diameter
- Short bearing span provides minimum rotor deflection
- Seals located in low pressure chamber of pump
- Replaceable liner
- Various coating and hardening methods to mitigate abrasion and corrosion
- Seal options include: single with and without throat bushing and double mechanical seals

Leistritz provides twin screw multiphase pump packages that range in scope from a single pump and motor mounted on a baseplate to complete turnkey packages that include: pump, motor or engine, baseplate, coupling, piping, strainers, valves, seal oil system, lube oil system, instrumentation and monitoring system, VFD, control system, liquid knock-out boot, leak detection system, and documentation including: P&ID, QA drawing, O&M manuals, etc.

The overall Leistritz design philosophy is to engineer a multiphase pump package suitable for each application, using standard building blocks and without unnecessarily complicating the system. Our ability to package in both North America and Europe allows us to easily adapt to local conditions and utilize local sub-suppliers ensuring our packages are based on familiar and approved components. Once installed, Leistritz Multiphase Pump packages are supported by our worldwide service network.
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