




		Primary Advantages	Oil & Gas Applications
<p>Single-Screw (Progressive Cavity) Pumps</p> <ul style="list-style-type: none"> • Rotor (eccentric screw) surrounded by elastomeric or metallic stator • Only one shaft seal and bearing 		<ul style="list-style-type: none"> • Flow rates up to 1,980 gallons per minute (gpm) (450 cubic meters per hour [m3/h]) and pressures up to 350 pounds per square inch gauge (psig) (24 bar) • Generates consistent, pulsation-free flow with low turbulence and shear • Material selection enables pumping of highly contaminated or high basic sediment and water fluids • Handles fluctuating working pressures and variable fluid consistencies 	<ul style="list-style-type: none"> • Crude, condensates, produced water/emulsion transfer • Cold heavy oil production with sands (CHOPS) • Horizontal and vertical pumps for wet pits/waste pits/sumps • Drilling mud conveyance • Tank and pipeline stripping
<p>Twin-Screw Pumps</p> <ul style="list-style-type: none"> • Two intermeshing screws synchronized by timing gears • No metal-to-metal contact due to geared link between screw shafts • Double-suction casing design with balanced hydraulic axial loads • Four shaft seals and bearings 		<ul style="list-style-type: none"> • Flow rates to 18,000 gpm (4,000 m3/h) and pressures to 1,500 psig (100 bar) • Can handle corrosive materials, multiphase flows (> 97 percent gas volume fraction [GVF]), variable fluid consistencies, dry running • Ultra-low net positive suction head (NPSH) and shear 	<ul style="list-style-type: none"> • Barge, tank, railcar loading/unloading • Pipeline booster and mainline pumps • Wellhead pressure control and gathering of multiphase flows • Refinery fluid transfer (fuel, bitumen, asphalt, residuum of vacuum, distillation, desalter tanks) • ROSE de-asphalting process • Tank and pipeline stripping
<p>Three-Screw Pumps</p> <ul style="list-style-type: none"> • Hydraulically balanced single- or double-suction pumps with three screws • Single-shaft seal and bearing (also available in seal-free designs) • Central-drive rotor with two meshing idler rotors 		<ul style="list-style-type: none"> • Flow rates to 3,300 gpm (900 m3/h) and pressures to 4,500 psig (310 bar) • Enhanced efficiencies with high fluid viscosities • Low noise, vibration and shear at high speeds • Low mean time between failures (MTBF) and maintenance 	<ul style="list-style-type: none"> • Heavy crude oil pipeline service • Crude loading and unloading • Refinery processes for high temperature and high viscosity products • Lubricating oil pumping