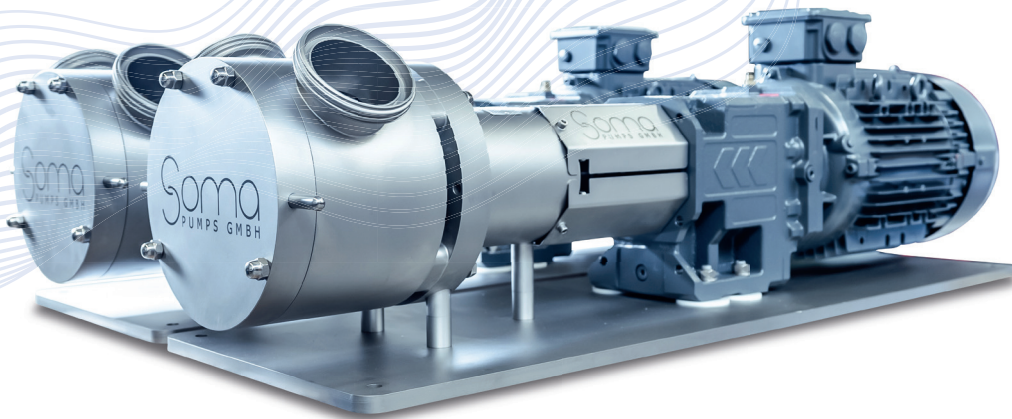




Criteria	SOMA SINUS SODIAL® Sinus Pump	Diaphragm Pump
Design	Few components, 1 sinus rotor & 1 seal → very robust	Many components: diaphragms, valves, seals → many wear parts
Maintenance effort	Very low, maintenance within minutes	Regular replacement of diaphragms and valves required, time-consuming
Maintenance costs	Low, few wear parts	High, diaphragms and valves are expensive
Product handling	Very gentle, almost shear-free	Risk of product damage from valves and pressure peaks
Flow / Pulsation	Almost pulsation-free, smooth product flow	Very strong pulsation, pulsation dampener mandatory
Energy efficiency	Up to 50% lower energy demand, even with highly viscous media	High energy consumption
Viscosity range	very wide, from 1 cps to 9,000,000 cps	Best suited for low- to medium-viscosity products, inefficient at high viscosity
Handling of solids	Very good, up to 80 mm without damage	Solids can block or damage valves
Temperature range	-30 °C to approx. 240 °C, pump housing heatable/coolable	Dependent on diaphragm material, usually max. 100-120 °C
Back pressure / discharge pressure	Suitable up to 40 bar	Typically 6-10 bar
Stainless steel execution	Fully stainless steel incl. bearing housing, no painted parts → hygienic	Often only housing parts in stainless steel, many add-on parts painted or plastic
Hygiene & cleaning	CIP-/SIP-capable, easy manual cleaning	Cleaning complex, residues may remain in valves & diaphragms
Operational safety	Very high reliability, no risk of sudden failures	Risk of diaphragm rupture → product loss and unplanned downtimes
Noise level	Very quiet operation, low vibration	Very loud in operation, strong vibrations possible