



***Apex technologies co.***, designed and manufactured a new compact generation of screw pump (up to ***22000 psi*** with minimum flow rate of ***0.001 cc/min*** with volume resolution of ***0.0001 cc***) assembly includes a pump body having an axial bore defining a travel chamber and a pressure chamber enable the operator to pump almost anything! These new single high pressure pumps are designed for applications requiring accurate pulseless flow and pressure control of different fluids such as:

- Core Flooding
- Reactant Feeding
- Supercritical Fluids
- HPLC and Ultra-HPLC
- Alternative Energy – Biomass

These pumps deliver specified pressure, flow rate and volume at both ambient and reservoir conditions and can operate at both constant pressure and constant flow rate. In the former mode, a pre-defined specific volume can accurately be transferred.

Pressurization is obtained via a servo motor-driven piston. The pump is equipped with an extreme accurate pressure sensor, two hand-operated valves for tank feeding and outlet delivery, a control panel and a storage tank.



Optionally, a computer data acquisition and supervision system can be provided. Furthermore, a variable temperature heating mantle can be supplied to heat the fluid up to 150°C. These pumps can be customized based on the client requirements. For example, although standard material for wetted parts and volume are stainless steel and 500 cc, hastelloy can be requested for corrosive fluid applications and different volumes can be ordered.





### Technical Specification:

A new and innovative design for the first time compared with domestic competitors make the equipment so compact, more reliable, user friendly, the most cost effective of its kind

Pressure accuracy: 0.5 % full scale (higher accuracy is available based on the client order)

Maximum injection pressure: 2000 bar

Wetted parts: Ti. Gr. 5

Valves and connections: Autoclave/ BuTech/ HIP

Minimum flow rate: 0.001 cc/min

Maximum flow rate: 5 cc/min

Cylinder volume: 100 cc

Constant flow rate and pressure modes

Pressure transmitters  $\times 2$

Displaced volume resolution: 0.0001 cc

