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# 305/306 HPLC Pumps



## Precise, Accurate Solvent Delivery for Analytical to Preparative Chromatography

### Feature

- Large selection of interchangeable Gilson pump heads
- Titanium or stainless steel heads
- Dynamic Mixing Module with interchangeable mixing chambers
- Single-piston head design
- Programmable 305 master pump with built-in gradient control and compressibility compensation controls up to three slave pumps and three peripherals
- 306 model is controlled via the 305 master pump or Gilson controller software

### Benefit

- Wide range (10  $\mu\text{L}$ –200 mL/min) of precise and accurate flow rates for isocratic or gradient HPLC
- Accommodate any type of liquid covering a wide range of flow rates and pressures
- Provides high-efficiency mixing for accurate and repeatable gradients over a wide flow rate range
- Powerful, smooth flow rates from a robust and laboratory-proven pump design
- Enables simple and easy upgrades from isocratic to binary, tertiary or quaternary gradients
- Flexible design; use the 306 Pump for elution or repetitive sample injection

### Applications

- Microbore to preparative HPLC
- Large-volume injection pumping
- Inert pumping systems for electrochemical detection
- Buffer gradients and ion exchange chromatography



# Technical Specifications

<b>Pump</b>	Reciprocating pump with single-piston interchangeable head, constant stroke and fast refill motion, external pulse dampener and pressure feedback			
<b>Pump Heads</b>  SC = stainless steel W = rinsing compartment for aqueous salt solutions ( $\geq 0.1M$ ) Ti = titanium * = pulse dampening/pressure control	<b>Pump Head Model</b>	<b>Flow Rate Range (mL/min)</b>	<b>Pressure Range psi (bar)</b>	<b>Manometric Module*</b>
	5SC	0.010–5	14.5–8700 (1–600)	805
	10SC	0.050–10	14.5–8700 (1–600)	805
	10WSC	0.050–10	14.5–8700 (1–600)	805
	10WTi	0.050–10	14.5–8700 (1–600)	805
	25WTi	0.125–25	14.5–4060 (1–280)	806
	25SC	0.125–25	14.5–4060 (1–280)	806
	50SC	0.250–50	72.5–2030 (5–140)	806
	100SC	0.500–100	72.5–1015 (5–70)	807
	200WTi	1.000–200	72.5–508 (5–35)	807
<b>Mixing Modules</b>	811D Prep Mixer: >10 mL/min, 23 mL; 110/220V 811D Analytical Mixer: 1.0–10 mL/min, 1.5 mL; 110/220V 811D Titanium Analytical Mixer: 1.0–10 mL/min, 1.5 mL; 110/220V 811D Titanium Analytical Mixer: 0.1–3.0 mL/min, 0.7 mL; 110/220V 811D Microbore Mixer: <0.1 mL/min, 65 $\mu$ L; 110/220V			
<b>Operating Modes</b>	Constant flow rate (Flow), constant volume (Dispense) and time-based sequence (Program)			
<b>Programmable Parameters (305)</b>	<ul style="list-style-type: none"> <li>• Solvent composition points for high-pressure mixing of three solvents from three pumps</li> <li>• Flow rate points that can be superimposed over gradient composition profile</li> <li>• Timed events for programming three output contact closures, one input and one injection pump</li> <li>• Time, adjustable from <math>10^{-2}</math>–<math>10^4</math> min with increments from 0.01–1 min depending on the range used</li> <li>• Flow control adjustable from 0.01%–100% of the maximum flow rate of the pump head being used</li> <li>• Up to 99 loops with unlimited linking of files</li> <li>• Storage for 10 user programs and four error files with a maximum of 25 points and timed events in each program</li> </ul>			
<b>Flow Rate</b>	Flow rate: 10 $\mu$ L/min–200 mL/min Coefficient of variation: 0.1%–0.6% with aqueous solutions or hydro organic polar solvent mixtures; 0.3%–1% with hydrocarbons or chlorinated volatile solvents Maximum accuracy error: $\pm 1\%$ with water over the full flow rate and pressure ranges			
<b>Pressure</b>	0.1–60 MPa (600 bar, 8700 psi), depending on pump head used Accuracy: $< \pm 1\%$ or 0.1 MPa (1 bar, 15 psi) Repeatability: $< 1\%$ or 0.1 MPa (1 bar, 15 psi)			
<b>Software</b>	Via Gilson UniPoint™ System Software			
<b>Communication Interface</b>	305: GSIOC; four inputs and three relay outputs			
<b>Display Panel</b>	305: 2 x 24-character LCD			
<b>Front Panel</b>	305: Keypad and built-in help messages			
<b>Liquid Contact Materials</b>	316L stainless steel, titanium, sapphire, ruby, ceramic, PTFE, PCTFE and HDPE			
<b>Power Requirements</b>	Frequency: 50–60 Hz Voltage: 100–120 or 220–240V; mains voltage fluctuations not to exceed $\pm 10\%$ of the nominal voltage			
<b>Environmental Operating Temperature</b>	0–40°C			
<b>Manufacturing Standards</b>	Meets applicable Safety and EMC certification standards; CE certified			
<b>Instrument Dimensions (w x d x h)</b>	33 x 33 x 15 cm (13 x 13 x 6 in.)			
<b>Instrument Weight (with head)</b>	10 kg (22 lbs.)			
<b>Shipping Weight (with head)</b>	14.5 kg (32 lbs.)			

For applications or additional information, contact your local Gilson Technical Sales Representative or visit [www.gilson.com](http://www.gilson.com).

## Gilson, Inc. World Headquarters

Middleton, WI 53562 USA  
 Telephone: 800-445-7661 or 608-836-1551  
 Fax: 608-831-4451

## Gilson S.A.S.

19, avenue des Entrepreneurs  
 F-95400 VILLIERS LE BEL France



[www.gilson.com](http://www.gilson.com)

[sales@gilson.com](mailto:sales@gilson.com), [service@gilson.com](mailto:service@gilson.com), [training@gilson.com](mailto:training@gilson.com)

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