



PEWA  
Messtechnik GmbH

Weidenweg 21  
58239 Schwerte

Tel.: 02304-96109-0  
Fax: 02304-96109-88  
E-Mail: [info@pewa.de](mailto:info@pewa.de)  
Homepage : [www.pewa.de](http://www.pewa.de)

## HI 901

### Automatic Titration System

- Precise dosing system (accuracy under 0.1% of burette volume)
- Supports up to 100 titration methods (standard and user defined)
- Clip Lock™ — change burettes quickly with auto burette recognition
- Dynamic/Linear dosing feature
- Fixed end point potential or pH
- Equivalence point detection (first derivative and second derivative)
- The results are displayed directly in the selected units
- Titration graph can be displayed on-screen and saved
- User customized reports can be printed, saved on floppy disk or transferred to PC via RS232 interface
- Reminders for titrant age and standardization expiration
- Self diagnostic features for peripheral devices including pump, valve, burette and stirrer

The HI 901 is an automatic titrator that compliments our wide range of products dedicated to quick and accurate laboratory analysis.

This titration system is provided with a host of numerous features suitable for routine sample analysis and performs acid/base, potentiometric and amperometric titrations. The HI 901 can also drive two pumps separately.

This versatile titrator supports up to 100 methods: standard or user defined. When powered on, the instrument initiates an internal diagnostics check and then readies itself for the first titration of the day. A large LCD screen clearly shows the chosen method, correlated information and also indicates which parameters may be adjusted. A real-time titration curve is shown on the display; this feature is useful when new methods are tested or when a procedure needs to be optimized. At the end of the titration, all data, including the graph, are automatically stored in memory and can be copied to disk via the built-in floppy drive or through direct connection with the serial cable supplied with the titrator. The titrators are equipped with an RS485 serial port.

Burette maintenance is simple and completely automated. The user can decide to purge it or wash it and can select how many washings to perform. With our exclusive Clip Lock™ system for burette replacement, changing from one titrant to another is done in a flash! Often, preliminary titration operations are very long and arduous. A burette often needs to be adjusted for correct dosing, which extends waiting time for new sample analysis. HANNA has engineered a way to solve this problem.

The innovative Clip Lock™ system allows users to change burettes in two simple steps, passing from one titrant to the next without any problem. Additionally, HI 901 automatically recognizes the volume of the new burette.

Users can connect pH or ORP electrodes to this unit, as well as create a complete workstation with a PC, monitor, keyboard and printer. This unit complies with GLP specifications, providing validation support for analysis. All GLP information from each sample can be stored, including ID number, date and time of analysis, electrode ID code and last calibration date.

Up to 100 reports of analysis, complete with titration curve graphing is possible. A calibration "time-out" can be set and the user can be advised when the pH electrode needs to be calibrated. The instrument's status can be viewed clearly on the large LCD screen. Contained in the set-up menu, features like language, display brightness, resolution, pH electrode calibration, date and hour can be adjusted. During analysis, the titration is displayed in real-time together with the stored data. Date, hour, temperature (when probe is connected) and warning messages such as a pH electrode calibration message can all be displayed for your convenience.

**Order Information:**

HI 901-01 (115V) and HI 901-02 (230V) is supplied with (1) 25 mL glass burette, (1) burette driver assembly, power adapter and instructions.

<b>Range</b>	<b>mV</b>	-2000.0 to 2000.0 mV
	<b>pH</b>	-2.000 to 20.000 pH
	<b>Temperature</b>	-5.0 to 105.0°C/23 to 221°F/268.2 to 378.2 K
<b>Resolution</b>	<b>mV</b>	0.1 mV
	<b>pH</b>	0.1/0.01/0.001 pH
	<b>Temperature</b>	0.1°C/0.1°F/0.1K
<b>Accuracy (@25°C/77°F)</b>	<b>mV</b>	±0.1 mV
<b>Burette Sizes</b>		5, 10, and 25 mL
<b>Burette Resolution</b>		1/40000
<b>Display Resolution</b>		0.001 mL
<b>Dosing Accuracy</b>		±0.1% of full burette volume
<b>Display</b>		graphic LCD, 320 x 240 pixel LCD
<b>Languages</b>		English, Italian, Portuguese, Spanish
<b>Methods</b>		up to 10,000 methods (standard and user-defined)
<b>Burette Auto-Detection</b>		burette size is automatically recognized when inserted into the unit
<b>Programmable Stirrer</b>		propeller type, 100-2500 RPM, automatically held within 10% of the set value, resolution 100 rpm
<b>Flow Rate</b>		user-selectable from 0.1 mL/min to 2 x burette volumes/min
<b>pH/mV Measurement</b>		titrators can also perform direct pH and mV measurements
<b>Temperature Compensation</b>		manual or automatic (ATC)
<b>pH Calibration</b>		manual or automatic at one to five points with four buffer sets or custom buffers
<b>Potentiometric Titrations</b>		acid-base (pH or mV-Mode), redox, precipitation, complexometric, non-aqueous, ion-selective, argentometric (in mV-mode only)
<b>Titration Methods</b>		fixed mV or pH end-point detection & first equivalency point detection (with the 1st or 2nd derivatives)
<b>Measurement Units</b>		user specified expression of concentration units to suit specific calculation requirements
<b>Real Time &amp; Stored Graphs</b>		mV-volume or pH-volume titration curve, 1st derivative curve or 2nd derivative curve, in pH-mode or mV-mode; pH/mV values versus time-datalogging results
<b>Data Storage</b>		up to 100 complete titration and pH/mV logging complete reports
<b>Disk Drive</b>		built-in 3.5" floppy disk drive allows storage and transfer of configurations, preprogrammed methods, custom methods, titration reports and bitmap graph files
<b>Peripherals</b>		connections for VGA display, PC-keyboard, parallel printer, RS 232 input, interface for future expansion
<b>GLP Conformity</b>		instrumentation data storage and printing capabilities
<b>Operating Environment</b>		10 to 40°C (50 to 104°F), up to 95% RH
<b>Storage Environment</b>		-20 to 70°C (-4 to 158°F), up to 95% RH
<b>Power</b>		110V/220 Vac; 50-60Hz

**Dimensions**

390 x 350 x 380 mm (15.3 x 13.8 x 14.9 in)

**Weight**

approx. 10 kg (22 lbs.) with one pump and stirrer assembly