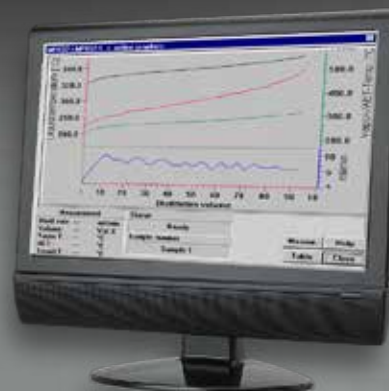


# HDV 632

**HERZOG**  
by **PAC**



The HDV 632 is a fully automated vacuum distillation Analyzer, which offers highest flexibility for the user. It can measure samples up to 650°C AET. Choose ASTM D1160 or define and save your own custom programs. Naturally, you can add, delete, and revise custom tests as your products and test needs evolve. The HDV 632 controls temperature, distillation

rate, and pressure with microprocessor precision. Volume measurements are made with digital accuracy, and test program selection is a simple "point and click" operation. Choose from an extensive library of built-in programs or your own predefined tests. The HDV 632 incorporates everything needed for fully automated distillation

testing, yet uses only 0.33 square meters (3.25 sq. ft.) of bench space. In fact, it even features built-in refrigeration systems — one for the cold trap plus a heater/cooler for the condenser bath — there is no need to run hoses to an external water supply or chiller system.

## ADVANTAGES

- Fully automated D1160 vacuum distillation
- Unparalleled precision and accuracy
- Simple to operate with powerful HLIS Software
- Automatic cleaning procedure
- Automatic sample degassing and programmable vacuum ramp
- High safety standards

## APPLICATION RANGE

- Volatility
- Liquid petroleum products
  - Vacuum gasoil
  - Biodiesel

## STANDARD METHODS

- In accordance with:
- ASTM D1160



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## HERZOG BY PAC

Herzog, originally established in 1937, is a long-established comprehensive line of laboratory instruments for testing distillation, flash point, vapor pressure, bitumen testing, cold flow properties, viscosity and other physical properties of materials.

## HDV 632: HIGHLY PRECISE, RELIABLE ANALYSIS

### EASY TO USE, PRECISION ANALYSIS

- Initiate tests with only a few clicks and keystrokes
- Digital Volume Measuring System with automatic calibration
- Dual transducer sensing system provides accurate, precise pressure measurements over a broad range of distillation pressures, including atmospheric pressures
- Digital, proportional pressure control eliminates transducer calibration and provides precise pressure regulation
- Easily removable receiver graduate eliminates need for any fluid connection
- Automatic cleaning sequence runs sufficiently long to clean the column and cool system for next distillation

### ULTIMATE FLEXIBILITY, PERFORMANCE

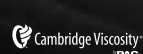
- Custom distillation curves record results at additional volume and temperature points or stop testing at a specific volume/temperature point
- Allows pressure transducer placement at top of condenser column or at top of vapor column
- Enables receiving compartment temperature control at setpoints from +10° to +80°C
- Automatic sensor prevents sample from foaming into column during pressure reduction sequence
- Automatically calculates required sample weight based on sample density, and adjusts distillation results for weighing errors
- Provides results in tabular, graphic, or customized format
- Stores data internally or exports to LIMS

## SPECIFICATIONS

| Ordering Information           |                                                                                                                                                                                                                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | Model HDV 632 Automatic Vacuum Distillation Analyzer                                                                                                                                                                                                                                                    |
| Standard Test Method           |                                                                                                                                                                                                                                                                                                         |
|                                | ASTM D1160                                                                                                                                                                                                                                                                                              |
| Performance                    |                                                                                                                                                                                                                                                                                                         |
| Sample Temperature Measurement | Auto calibrating sample thermometer circuit with integrated precision fixed resistors; 10 point on-screen calibration                                                                                                                                                                                   |
| Condenser Temperature Control  | 0° to 80°C operating temperature; liquid jacket, independent of receiver; programmable for temperature ramping during distillations                                                                                                                                                                     |
| Mechanized Volume Measurement  | Digital infrared meniscus follower, unaffected by ambient light; precision stepper motor, resolution to 0.05 ml; calculated as function of motor steps, confirmed by optical detector; self-calibrating                                                                                                 |
| Distillation Rate Control      | Automatic—proven algorithm controls temperature in the flask; heater conforms to CE safety specifications; "Follow the heat curve" software function permits manual adjustment; distillate receiver provides independent temperature control with programmable temperature ramping during distillations |
| Documentation                  |                                                                                                                                                                                                                                                                                                         |
|                                | Local display; parallel output port standard; RS-232 serial output port standard; PC and printer optional; compatible w-with HLIS for Windows®                                                                                                                                                          |
| Measurements                   |                                                                                                                                                                                                                                                                                                         |
| Temperature                    | Non-inertial, low mass thermocouples protected by rigid metal thermowell for reliable operation                                                                                                                                                                                                         |
| Pressure                       | Built-in gauges: differential (in-flask pressure) & barometric                                                                                                                                                                                                                                          |
| Heating System                 | Percent recovered or evaporated calculated against recorded pressure variation in the flask during distillation run                                                                                                                                                                                     |
| Diagnostics & calibration      |                                                                                                                                                                                                                                                                                                         |
|                                | Real time status display and control for all mechanical and electrical systems locally or with optional PC network; 10 point on-screen calibration of resistance thermometer; recovery volume calibration with dry reference graduate                                                                   |
| Physical                       |                                                                                                                                                                                                                                                                                                         |
| Electrical Requirements        | 230 VAC (115 VAC with transformer), 3100 watts, 50/60 Hz                                                                                                                                                                                                                                                |
| Dimensions                     | 49 cm W x 63 cm D x 103 cm H (19.3 x 24.8 x 40.5 inches)                                                                                                                                                                                                                                                |
| Weight                         | 104 kg (230 lbs)                                                                                                                                                                                                                                                                                        |

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