

FEATURES

- Fully automatic apparatus ASTM D1160, ISO 6616, JIS K 2254
- Real time curves and synoptic display on Color LCD Display.
- Automatic, variable speed vacuum lowering and regulation.
- Automatic distillation rate control.
- Automatic IBP, first drop and FBP detections.
- Multiple fractions at atmospheric and vacuum pressure.
- Automatic sample degassing and cleaning.
- Run in °C, °F, mmHg or mBar.
- Extensive library of distillation programs.
- Data storage of unlimited distillation runs with USB key and/or LIMS transfer.
- Built-in Ethernet interface.
- Printer included.



MINIDIST 1160 V7



MINIDIST 1160 V7 -M Multifractions

BENEFITS

FULLY AUTOMATIC ASTM D1160, ISO 6616, JIS K 2254
NO OPERATOR INTERVENTION FROM START TO FBP 650 C AET
VACUUM DYNAMIC LOWERING TO ACHIEVE MAXIMUM RECOVERY
UP TO 10 ANALYSIS PER DAY
EASY OPERATION IN LOCAL-MODE WITH LINUX GECDIST V7 SOFTWARE
NO NEED OF AN EXTERNAL PC TO OPERATE ALL FUNCTIONS OF GECDIST V7
SMALLEST FOOTPRINT UNIT, WITH NO EXTERNAL DISPLAY OR KEYPAD
READY FOR BIO-FUELS AND BIO-OILS APPLICATIONS
MORE THAN 40 YEARS EXPERIENCE MANUFACTURING AUTOMATIC D1160

GENERAL DESCRIPTION



Fully automatic distillation unit, in accordance with ASTM D1160 method, distills crude oil residue or lubricating cuts with automatic procedure from preheating to reduced pressure, up to the final boiling point (FBP) and return to atmospheric pressure, without any intervention of the operator.

This unit facilitates all types of discontinuous distillation of chemical and organic components for boiling temperatures up to 350°C under atmospheric pressure. As well as, vacuum down to 0.1 mmHg, the atmospheric equivalent temperature (AET) of 600-650°C.

The operator can control the unit in local-mode, with all necessary functions: programming, result storage, synoptic color display, curves display, diagnostic mode, data transfer and more.

The new version, V7.0, benefits from 40 years of technical experience allowing runs for heavy and light oil, residues and difficult samples, as well as, atmospheric runs with a custom design program to quickly access parameters at any moment. All features are included without compromising safety.

The easily accessible control unit consists of:

- A set of all electrotechnical elements necessary to activate the process elements gathering the pump, heaters, electrovalves, motors, etc.
- A built-in Linux Industrial Pentium processor, with all necessary interfaces and software to control the distillation unit. User friendly software allows the operator to visualize and control the status of the distillation in local-mode.

All electrotechnical components are industrial grade, allowing quick access for maintenance. Major elements of the distillation unit are protected by fuses or power breakers. The unit includes a main differential breaker, all power supplies, transformers, and cooling fans.

PROCESS DESCRIPTION



The MINIDIST 1160 V7 unit includes all ASTM D1160 glassware, head and flask probes, electronic pressure sensor 10 or 100 mmHg, first drop detector, level follower system for volume and distillation rate control, automatic hot-air receiver chamber, vacuum proportional leak valve, vacuum pump, thermostated condenser circulating bath, automatic cooldown at the end of the distillation and automatic vacuum control.

An embedded Linux Pentium distillation controller includes the following:

- (1) Industrial Linux Pentium PC104 board, with GECIL multitasking system and distillation software GECDIST version V7.0
- (4) USB ports hub
- (1) Static flash memory card, with several GB's for software and results storage
- (1) A/D and I/O interface board
- (1) 10" LCD color display and industrial alphanumeric keyboard with function keys
- (1) Mouse or trackball
- (1) RS232/RS485 data cables

(1) Ethernet Port for remote control and transfer of results with TCIP Protocol

(1) Printer, compatible with Linux



Comprehensive, user-friendly software, GECDIST V7, allows the operator to access: several graphic screens with synoptic display, curves display, distillation and calibration parameter files, maintenance and diagnostic screens in local-mode.

Just select a distillation program from the library and press the START key.

The MINIDIST1160 V7 automatically controls the distillation up to the final boiling point by preheating the sample to avoid foaming, automatic vacuum lowering, initial heating, first drop detection and distillation control.

The program will memorize all analog and digital data for every 0.1% volume and millisecond. During process, several programmable alarm levels are monitored for safe operation.



Upon customer request, manual switches for rapid control of the main elements of the unit have been maintained. Overall Dimensions (W)65 x (D)50 x (H)85 cm. Footprint: 0.325 square meters . Weight:

Approx.110 Kgs. Voltage and Frequency: 230V 50HZ +/- 10% or 115V 60HZ +/- 10%

OPTIONAL: VACUUM TRAP CRYOPLUNGER

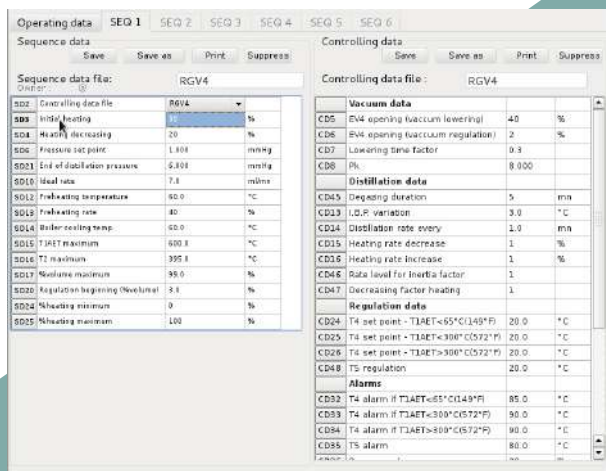
A cooling cryoplunger may be installed to avoid using dry ice in the clear glass vacuum trap with collecting flask. This design allows the user to quantify any potential light ends during distillation, unlike closed cabinet systems where all light ends are exhausted in the oil of the vacuum pump.

Other optional accessories available on request:

- Additional pressure sensor with different range, installed on the column glass trap.
- Electrical lift LabJack with remote control.
- Electrical flask cooling, when more efficient compressed air supply is not available in the lab.
- Special software for multifractions operations. Model MINIDIST 1160 M

GECDIST V7 EMBEDDED SOFTWARE

The new GECDIST V7 software allows full unit control.



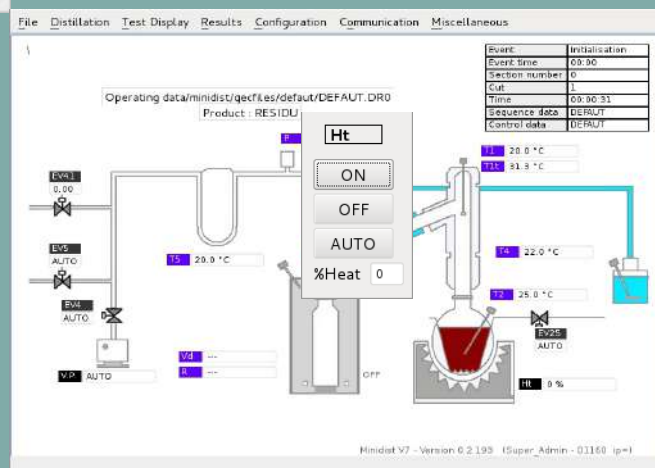
This new software allows all functions previously handled by our acclaimed GECDIST-Net External PC supervisor software.

- Create and save new distillation data programs with operating, sequence and controlling parameters at a glance.
- Real-time access, with a mouse click on the synoptic screen, to all control and operation parameters (set point, alarm level, Etc.) for the selected element, during a distillation or in stand-by mode.
- Real-time control of all selected components of the distillation unit.
- Multi-point calibration of all probes.
- Multi-user config with password.
- Generate log file at each run for traceability and technical support.
- Automatic restore function to factory setting.
- Display, zoom and configure curves of all analog signals, rate, % V, Etc.

With GECDIST V7, users experience a new level of MINIDIST 1160 V7 remote control and data treatment, with the ease of a Windows style environment.

GECDIST V7 allows the operator to run distillation, directly from the unit, without an external PC. Results in .Pdf or .csv formats can be retrieved via USB key, LIMS transfer or local deskjet printer.

CONTACT US for additional information. Our technical sales staff will be glad to highlight the benefits of our new generation of MINIDIST 1160 V7 and GECDIST V7 software.



| Ht | | |
|------|------------------------|---------|
| SD3 | Initial heating | 30 % |
| SD4 | Heating decreasing | 20 % |
| SD12 | Preheating temperature | 50.0 °C |
| SD33 | Preheating rate | 40 % |
| CD42 | Pre-heating alarm | 30 min |
| SD24 | %heating minimum | 0 % |
| SD25 | %heating maximum | 100 % |

Buttons: Cancel, OK



ABOUT US

Created in 1967, GECIL Process was the first manufacturer, worldwide, of fully automatic distillation D2892 and D1160 units.

Specializing in automation of petroleum testing apparatus, with a focus on distillation, GECIL Process is also renowned as a glass-blowing company for creating the necessary components in compliance with current ASTM methods. Founded in 1984, our subsidiary, GT Instruments, provides distribution and servicing of our petroleum testing equipment in the Americas.

Internationally renowned expertise in automation allows us to upgrade all GECIL Process crude oil evaluation distillation apparatus manufactured and installed since 1974, to the latest control instrumentation.

Seven generations of automatic distillation units have been introduced for our line of crude oil evaluation apparatus. Continuous feedback from users and participation in several standardization organizations, such as ASTM, keeps us on top of the latest design modifications and improvements for GECIL Process distillation apparatus.

QUALITY

All units are manufactured at our facility in France and quality tested prior to delivery

LONGEVITY

Staying ahead in R&D is a GECIL core value. We take pride in knowing that some of our first units sold are still in use.

SERVICE

Our comprehensive customer service standards include training, installation, updates, follow-up, and remote technical support. We provide the best to meet your needs.

CUSTOMIZATION

Our expertise and passion allow us to work with petroleum, chemical, pharmaceutical and biochemical industries to design and create innovative processing units for their needs.

GECIL Process Values

By choosing a GECIL Process distillation unit, you can be sure that your investment will last for decades.

LOCATIONS

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