

PILODIST®

laboratory & process technology

PETRODIST® 100 CC



www.pilodist.de

Tel: ++ 49 (0) 2225 955910

Fax: ++ 49 (0) 2225 9559111

e-mail : info@pilodist.de

PILODIST GmbH
Eichelnkampstraße 2
D-53340 Meckenheim

Eingetragen AG Bonn HRB 12941
Sitz: Bonn
Managing Director K. Jürgen Fischer
USt.-ID.-Nr. DE 813 408 398

Bankers:
Sparkasse KölnBonn
IBAN DE 05 3705 0198 0033 3023 65 BIC: COLSDE33XXX
Deutsche Bank AG
IBAN DE 46 3707 0060 0333 2673 00 BIC: DEUTDE33XXX

PETRODIST® 100 CC - 20 L (new edition 2015)

Processor controlled crude oil distillation system for fully automatic operation exactly conforming to ASTM D-2892 (TBP), latest revision.

The system is computer controlled and designed for fully automatic operation throughout the different distillation runs at different pressure levels which includes:

- debutanization
- run at atmospheric pressure
- run at vacuum 100 Torr
- run at vacuum 10 Torr
- run at vacuum 2 Torr

These different distillation runs are performed automatically without any intervention of the operator. The system automatically manages the changes of all involved operation pressure changes from atmospheric to the different vacuum conditions automatically with. The duration of the intermediate cooling procedure in between the different runs is minimized by an intensive cooling of the flask charge as well as introduction of N₂ into the system.

The system measures online the volume of each fraction before each cut is being discharged into an automatic fraction collector with 20 receivers. The fraction collector is equipped with an inbuilt electronic balance to measure the weight of each fraction. By replacing filled receivers the system can handle up to 80 cuts for the distillation of one sample. The receiver change is performed according to pre-selected cut temperatures or when a receiver is filled up to continue the cut sampling in the next receiver (to avoid overfilling of the receiver).

After the distillation the operator needs to weigh the gas trap as well as the flask residue by the external balance (part of delivery), the weights are automatically taken by the system and as a result the final data evaluation and TBP-curves in weight-% and volume-% are printed out and can be stored.

The system can optionally be equipped with an online density measurement system.

The system requires for operation water, nitrogen, compressed air and electricity to be supplied by lab infrastructure.

Key features:

- Computer controlled fully automatic process without any interruption
- DELL PC with windows based operation and evaluation software
- continuous monitoring of distillation process and data storage
- boil-up rate controlled by differential temperature, differential pressure, power regulation and distillate volume
- all distillation parameters can be exactly and reproducibly selected
- fraction and receiver changes are performed acc. to preselected cut temp.
- fully automatic product discharge into sealed final receivers without any influence on the distillation process
- automatic debutanization process
- adiabatic operation due to column heating jacket
- reduced cooling periods between runs by using a quench cooler and nitrogen
- cooling down process after each run automatically
- precise vacuum control
- electrical lifting platform for flask
- evaluation of the "final data" and printout of TBP-curve in Microsoft Excel
- several safety and alarm options available
- automatic online volume **and** automatic **weight** measuring
- all distillation datas (results) will be stored even in case of an alarm, followed by automatic shut down
- optional automatic online density measurement
- optional water removal (dehydration)
- -various further options available to customize the system

Technical data:

Flask sizes:	1, 4, 6, 10, 20, 50 L or upon request
Flask charge:	between 30 and 60 % of flask volume
Operating temperature:	up to 350° C (420° C AET)
Operating pressure:	atmospheric down to vacuum 1 Torr
Fraction collector:	20 septum sealed receivers, 1 L each, 80 cuts
Max. ambient temperature:	25° - 30 °C
Mains supply:	230 / 380 V, 50 Hz, 5-wire system, 3-phase + N + PE or upon request
Dimensions (w x h x d):	depending on flask volume