SINPAR
PETROLEUM TESTING EQUIPMENT

Automatic Reference Fuel Blending System for Octane & Cetane Number Determination

Shanghai Sinpar Scientific Instrument Co.,Ltd

Professional Manufacturer of Octane Engines

www.sh-sinpar.com

Automatic Reference Fuel Blending System

SINPAR FTC-AD1 Automatic Reference Fuel Blending Unit equipped with a modern computerized automatic control system, is used for the automated preparation of octane and cetane reference & standardization fuels blends for octane & cetane number testing according to ASTM D2699, ASTM D2700, and ASTM D613 standard test methods.

How to Accurately and Efficiently Prepare a Reference Fuel Blend?

In the traditional volumetric blending procedures, human error is unavoidable, and it is difficult to achieve both accuracy and speed.

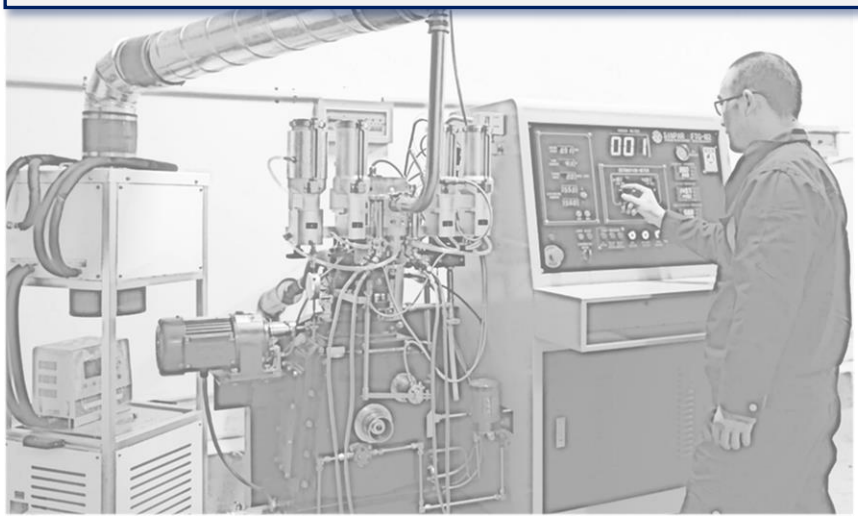
Now, SINPAR FTC-AD1 Automatic Reference Fuel Blending System has solved this problem for you! With the automatic gravimetric measurement control system, it makes fuel blending *more accurate, faster* and *without human error*, and saves you a lot of time.

Why Choose FTC-AD1 Automatic Reference Fuel Blending Unit?

As is known to all, the accuracy of the reference fuel blend directly affects the result of the cetane/octane rating. A device that can prepare the fuel blend *accurately* and *efficiently* is very important to ensure the accuracy of octane/cetane number determination.

SINPAR is a professional manufacturer of fuel rating equipment. FTC-AD1 was developed based on SINPAR's many years of experience in fuel rating.

Over the years, it has been used not only in our own testing centers, but also in many laboratories around the world.
Its good and stable working performance has been well received by users.
It is increasingly becoming a *must-have* in octane/cetane LABS.



Automatic Reference Fuel Blending System

Features & Benefits

■ **Standards**
ASTM D2699, ASTM D2700, ASTM D2885, and ASTM D613 standard methods.

■ **High Precision**
An electronic balance with the high precision of *0.01g* is used for gravimetric measurement to ensure the accuracy of blending.

■ **Simple Operation**
A built-in touch-screen computer panel with *easy-to-use* installed software simplifies the blending operation.

■ **Accuracy and Efficiency**
The automatic calculation program controls the whole blending process to *eliminate human error* and improve the efficiency of octane/cetane testing.

■ **Safety and Real-Time Monitoring**
The unit is equipped with electrical protection & temperature monitoring system to meet labs safety requirements.
Fuel temperature and level in the tanks are monitored in real time, with *low fuel level* & *overfilling* warnings.

■ **Reliability and Durability**
The whole system is installed in a *movable and stable* industrial cabinet, which can connect to the laboratory's ventilation system.
The structure design ensures its reliability, safety, durability and usability.

Key Points

✓ **high accuracy**

✓ **easy-to-use**

✓ **automatic control**

✓ **automated documentation**

✓ **save time**

✓ **economic**

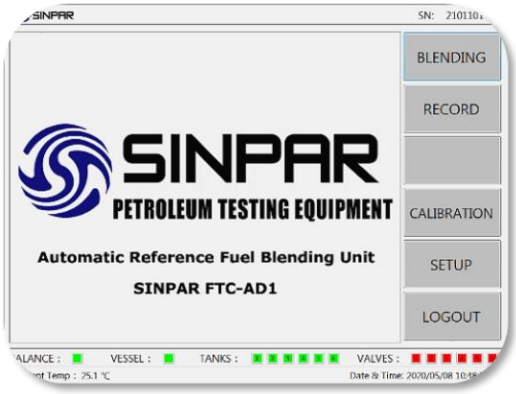
✓ **safety**

✓ **durability**

Automatic Reference Fuel Blending System

Automatic Blending By Weight

The blending unit prepares the reference fuel blends by weight (using a precision electronic balance) based on the ASTM test methods.
With the automatic calculation and control program, it delivers the accurate and reliable fuel blend value with the precision of 0.01 ON/CN.



Professional Blending Software

The software was developed by SINPAR specifically for fuel blending. It is simple, clear, easy to use and requires no training.

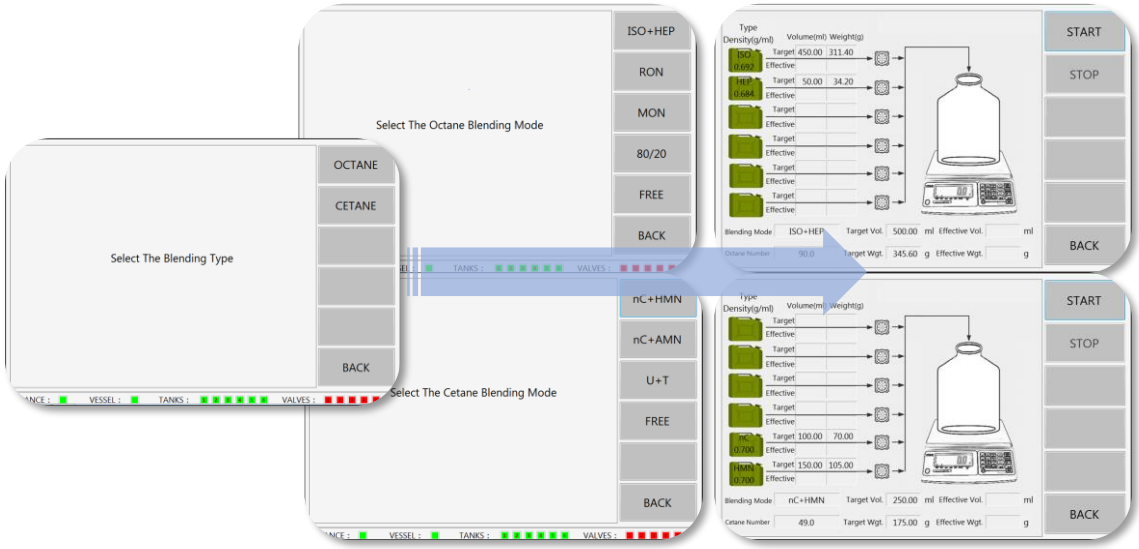
From the main screen can access octane or cetane "BLENDING" operation, view blending "RECORD", perform pumps "CALIBRATION" and necessary "SETUP".

Status indicators of balance, vessel, tanks and valves are displayed in real time.

Octane/Cetane Blending Operation

The operator just needs to select the blending mode, enter the target blending parameters, and press "START" to begin the blending.
The automatic computational control system controls the whole blending process.
An accurate blend is delivered to the vessel automatically.

Free Blending mode is provided for special fuels blending.



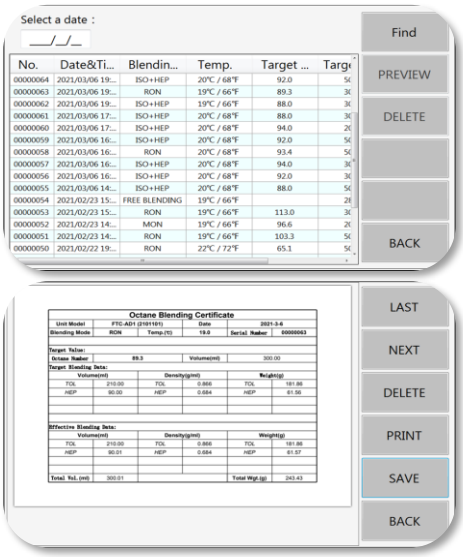
Automatic Reference Fuel Blending System

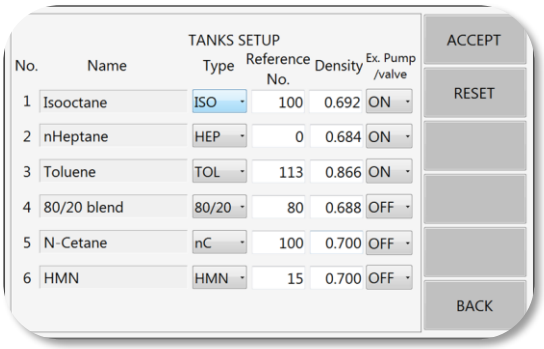
Blending Record/Certificate

After the blending process is complete, the blending record is automatically saved in the computer.

The blending certificate can be printed or saved to a mobile storage device, containing all necessary data:

- *Blend serial number*
- *Blending mode*
- *Date & time*
- *Ambient Temperature*
- *Target blending data*
- *Effective blending data*
- *Consumption of blending components*





System Settings

The necessary settings include the tanks, blending components parameters, pumps parameters, etc., which can be modified and set according to laboratory conditions.

The system can be flexibly applied to various laboratory conditions to meet the different requirements.

Optional Quantity of Tanks Available

The unit is available supply with *3/4/5/6* fuel tanks options to ensure availability for multiple octane/cetane test requirements.

Automatic Refueling System (*option*)

The fuel refilling from external tank into internal tank is automatically controlled by the system under *nitrogen pressure*.

When the fuel level of the tank is low, the external refueling will automatically start, and stop once the tank is full.

Technical Specifications

Applicable Standards	**ASTM D2699, ASTM D2700, ASTM D613**
Application	For Octane and Cetane Number Determination
Measurement Mode	Gravimetric Measurement by Precision Balance
Fuel Blending Mode	Automatic Fuel Blending System with Software
Operating Mode	Built-in Touch Screen Computer
Tank Quantity	Optional Quantity(3/4/5/6) of Tanks with 10 L. Each
Blend Accuracy	±0.01 ON/CN
Blending Speed	1~2 min/500 ml
External Refilling System	Automatic Refilling Internal Tanks from External Tanks under Nitrogen Pressure *(option)*
Monitoring System	Real-Time Monitoring Fuel Temperature and Level; Low Fuel Level & Overfilling Warnings
Calibration Function	Precision Electronic Balance and Dosing Pumps
Blend Data	Auto-Saved Blending Certificate
Power Supply	100~240VAC 50Hz/60Hz with Single Phase
Safety System	Electrical Protection System & Temperature Monitoring
Ventilation System	Available to Connect with Aspirator or Ventilation Duct
Weight	200.00 kg (with six empty tanks)
Dimension	85.0x65.0x168.0 cm

**Due to continuing products development, the illustrations used may differ from actual products, and specifications are subject to change.*

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