

Pilot Plants - San Donato Milanese

In the R&D Center of San Donato Milanese the **pilot plant facilities** currently comprise **16 units** (1 in construction).

The pilot plants have **capacity ranging from 0.1 to 3.5 kg/h** and can play small-scale conventional refinery processes and / or industrial processes of new concept.

They have a high degree of **flexibility** that allows the evaluation of different processes with currents ranging from LPG and naphtha to vacuum residues and vegetable oils (soybean, rapeseed, palm).

They are **fully automated** and managed by a **distributed control system** (DCS) that acquires the control parameters in real-time. They are also equipped with **on-line analytical instrumentation** for analysis of gases and liquids (total sulfur), computer data acquisition and data collection.

Thanks to the **high degree of automation** the majority of the units can be operated 24/24 hours 7/7 days in unattended mode.



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In the assessment of **conventional refinery processes** pilot plants are used for the testing of catalysts and feedstocks and for the parameter optimization in the following processes:

- Hydrocracking
- Hydrotreating
- FCC
- Hydrogenation
- Reforming/Isomerisation
- Visbreaking
- Coking



For **petrochemical processes** schemes that employ **reactive columns** for the synthesis of isooctane and dimethyl ether (DME) have been developed.

There are also facilities for fluid dynamics testing in multipurpose loops and mock-up plants for fluid bed reactors and bubble columns

