



IFTS TEST BENCHES



IFTS FILTER TEST BENCHES

30 YEARS OF EXPERIENCE IN TEST BENCHES DESIGN AND MANUFACTURING

IFTS has designed and manufactured its first test stand in 1984 for its own internal use and has sold the first one to a filter manufacturer in 1990. IFTS strategy since then has been to keep its skill in test bench design and manufacturing for its own ISO 17205 accredited Testing Center accepting rarely to export it outside of IFTS premises.

In year 2011 IFTS decided to change its strategy and set a dedicated organization for selling test benches for any requiring customer. The strategy instantly becomes a success turning IFTS into one of the world leaders in filter test benches design and manufacturing.

STRONG CUSTOMER SUPPORT ORGANIZATION

A dedicated team allows offering the following services:

- > Technical assistance / troubleshooting;
- > Technical documentation;
- > Customer Service items, including spare parts, support equipment tools and other services such as check-ups, calibration, repairs, exchanges, upgrades...;
- > Guaranteed performances;
- > Warranty and warranty administration;
- > Training of customer personnel

AN EXPERIENCE BASED ON IFTS INTERNATIONAL STANDARD DEEP INVOLVEMENT

IFTS participates as chairman and expert in the following ISO working groups:

- ISO TC 20 Aeronautical fluid circuits**
- ISO TC 22 Fuel filter for internal combustion engines**
- ISO TC 24 Granulometry / particle counting**
- ISO TC 70 Lubricant filters for internal combustion engines**
- ISO TC 131 Hydraulic power system**



International
Organization for
Standardization

As a Research & Development center involved for more than 20 years in all ISO committees drafting filter test standards, whatever their field of application, IFTS is the only stand supplier able to anticipate the upgrading/modification of existing stands to fulfill future standard requirements, if any.

IFTS originated the revision of ISO 4572 leading to the ISO 16889 in the 90ies and, since then, introduced the online particle counting technique (ISO TR13353) and the multipass testing principle in the automotive industry (ISO 19438 and ISO 4548-12). IFTS has introduced in all these standards the now well accepted standard requirements on allowed test conditions.

IFTS is currently the project leader of the revision of ISO 11943 specifying the principles and requirements of online particle counter calibration and secondary calibration suspension preparation.

PROVEN RELIABILITY

IFTS is its own “best customer” using daily 12 internally designed and manufactured IFTS test benches.

Thanks to a successful technology transfer, IFTS test benches are being operated reliably for years in the broadest scope of conditions at customer facilities worldwide.

Return of Experience is being closely analyzed thanks to the Product Support Organization in place

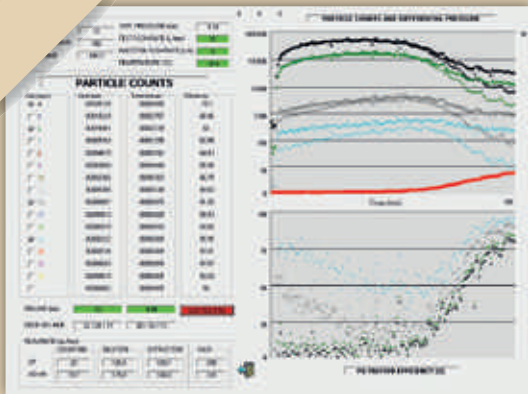
This means IFTS equipment satisfy the most requiring criteria in term of accuracy and reliability.



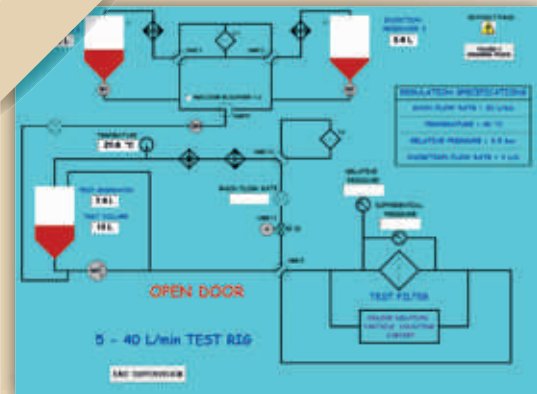
FILTRATION EFFICIENCY AND RETENTION CAPACITY TEST BENCHES

STEADY AND CYCLIC FLOW

100% compliant with ISO 4548-12 (lube oil application) - SAE J1858 (steady flow) - ISO 16889 (fluid power application) - ISO 19438 (diesel fuel application) - ISO 23369 (cyclic flow - fluid power application).



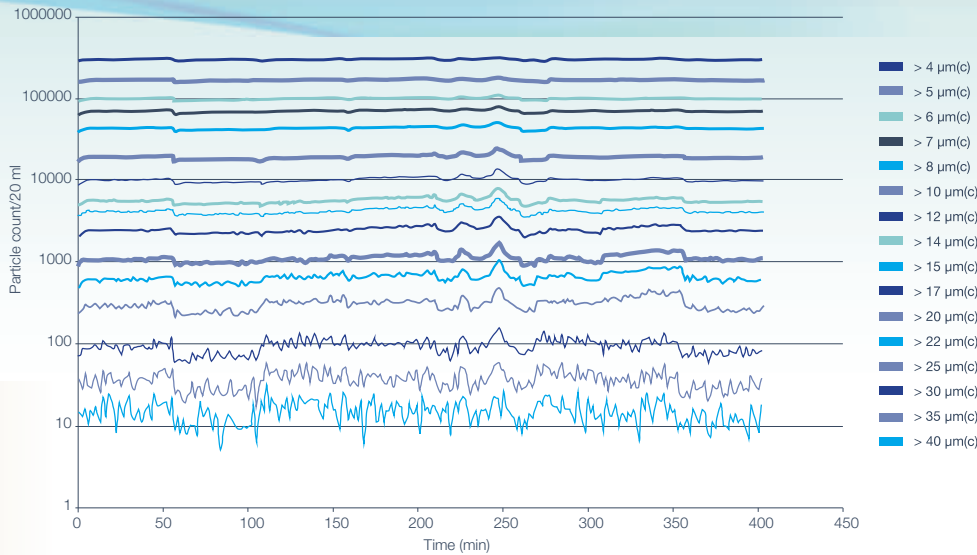
Filtration efficiency and clogging curve monitoring at a glance



User-friendly interface and test conditions monitoring

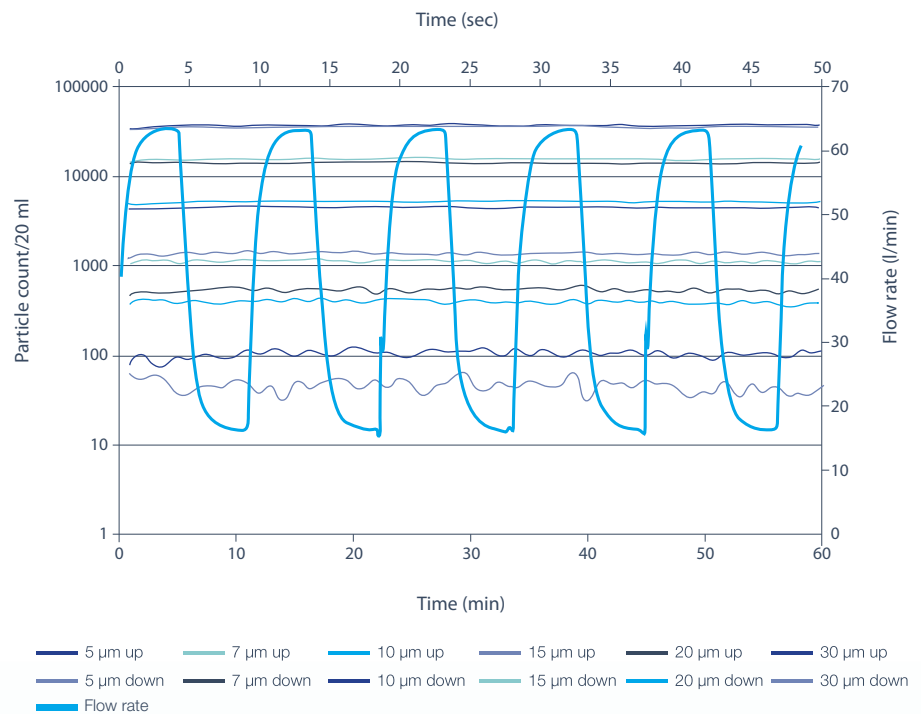
The most advanced design for the most accurate results





Stability of test dust injection over time.
Example of stability during 400min, in steady conditions.

Stability of particle counting in cyclic flow rate conditions

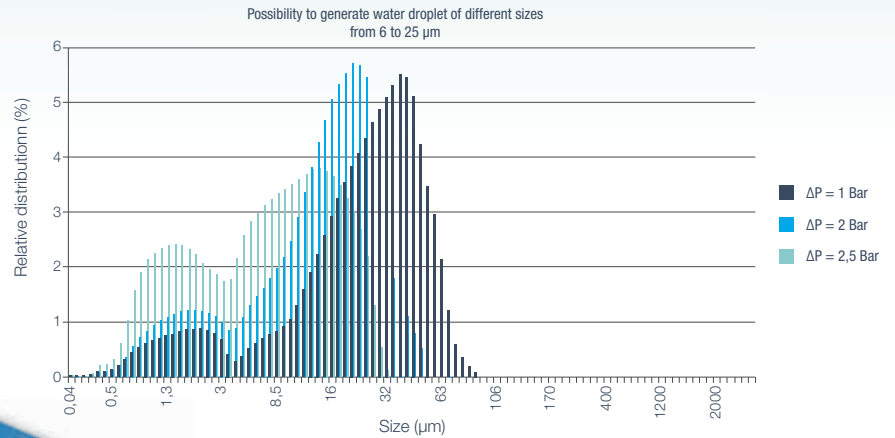


CHARACTERISTICS	DESCRIPTION
Fluid flow (steady)	Experience from 0.25 to 800 l/min
Fluid flow (cyclic)	Experience from 20-100 l/min (frequency 0.1 - 1 Hz)
Number of circuits	From 1 to 3 for the full range of fluid flow
Dimensions	L 2.96 m x W 1.61 m x H 2.03 m
Operation	Ability to be manually operated Ability to operate automatically Automatic data acquisition at the end of the test and automatic switch to clean-up mode Pumps stop upon test completion Automatic start of the bench can be scheduled Test runs until predetermined conditions are reached
Separate dilution and counting cabinet	Automatic report generation according to selected standards On-line continuous Particle Counting 64 channels: 32 upstream / 32 downstream L 0.8 m x W 0.6 m x H 2 m
Filter differential Pressure	Dilution up to 1:30 to guarantee accuracy Up to 40 bar

DIESEL FUEL-WATER SEPARATOR TEST BENCHES

100% compliant with ISO 16332, SAE J1488 / J1839, ISO 4020 6.5

*Nominal droplet size ranging
from 2 to 300µm*



Genuine design of water droplets generator adopted by ISO committees



*Fuel filters fulfill two functions : they retain particles
IFTS offers solutions to evaluate all performances
Water Separation efficiency.*

CHARACTERISTICS

Test fluid
Number of circuits

Dimensions
Temperature
Droplet size range
Flow rate range
Option

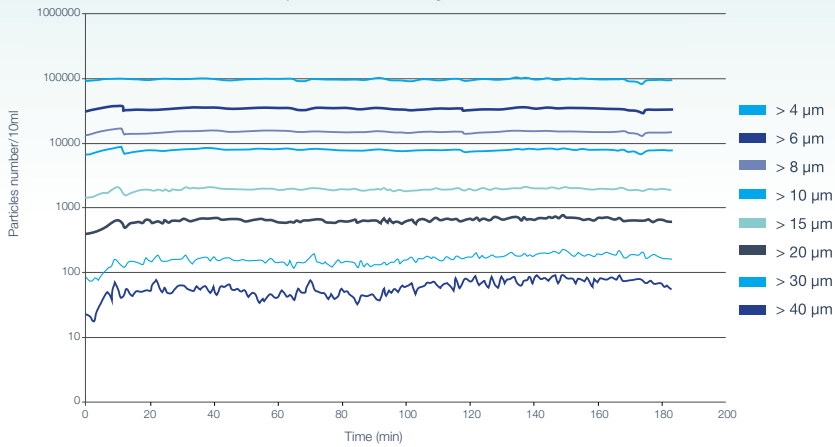
DESCRIPTION

Biofree B0- B20-B30-B100 diesel fuel – EN 590
Up to three circuits – one dedicated to SAE J1488, one dedicated to ISO 16332 and SAE J1839 and one dedicated to ISO 4020 6.5
L 3 m x W 1.5 m x H 2 m - 1000 kg full of fuel
60 °C (80°C in case of B100)
2-300 µm
1-30 l/min (ISO 16332)/ 1-25 l/min (SAE J1488)
Fullers earth on line processing
On line water titration
On line water droplet size analyser

SINGLE-PASS / GRAVIMETRIC FUEL FILTER TEST RIGS

100% compliant with SAE J1985 / SAE J905

Stabilization of the particle number during time in ISO 4113 fluid



*Test dust injection and particle number:
Proven performance, even in critical conditions.
ISO 4113 has a low viscosity, tending to cause particles sedimentation*



*and separate water from fuel.
of fuel filters : Single-pass gravimetric efficiency and Fuel*

CHARACTERISTICS

DESCRIPTION

Test fluid
Fluid flow
Dimensions
Operation

EN590; bio fuel (B20, B30, B100); bio free fuel – V oil – ISO 4113 – SAE J1696
0.5-25 l/min
L 2.96 m x W 1.61 m x H 2.03 m - 2 000 kg of oil
Ability to be manually operated
Ability to operate automatically
Automatic data acquisition at the end of the test and automatic switch to clean-up mode. Pumps stop upon test completion
Automatic start of the bench can be scheduled
Test runs until predetermined conditions are reached
Automatic report generation according to selected standards
On-line continuous Particle Counting 64 channels: 32 upstream / 32 downstream.
L 0.8 m x W 0.6 m x H 2 m
Up to 10 bar

Separate counting cabinet

Filter differential Pressure

FILTER MEDIA INTEGRITY TEST BENCH

100% compliant with ISO 2942, EN 24003, ASTM E1294



Bubble point test rig dedicated to evaluate the filter integrity of the filter cartridge - Quality control device

CHARACTERISTICS	DESCRIPTION
Test fluid	IPA or any equivalent solvent
Dimensions (to be customized)	By default: L 1000 mm – D 240 mm – W 250 mm
Option	Automatic refilling and draining of the reservoir

ON LINE AUTOMATIC PARTICLE COUNTER (APC) AND FMC CALIBRATION TEST RIG

100% compliant with ISO 11943

*ISO 11943 calibration test loop of APC and FMC
Quality control device*



CHARACTERISTICS	DESCRIPTION
Fluid volume	7L - designed according to ISO 11943
Number of sampling ports	A first one dedicated to the reference APC A second one dedicated to the APC or FMC
Dimensions	L 1 m x W 0.8 m x H 0.8 m
Operation	Ability to be manually operated. Automatic switch to clean-up mode. Automatic start of the bench can be scheduled. Regulation of test parameters such as temperature – flow rate

A WIDE OFFER OF FILTER TEST BENCHES AND EQUIPMENT

- Filtration efficiency and retention capacity - steady and cyclic flow
- Diesel fuel - water separation
- Gravimetric efficiency
- Single-pass filter efficiency and retention capacity
- Filter integrity
- On line APC calibration
- Pressure drop characteristics
- Flow fatigue
- Collapse / burst
- Cold start simulation and hydraulic pulse
- Clean solvent dispenser





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