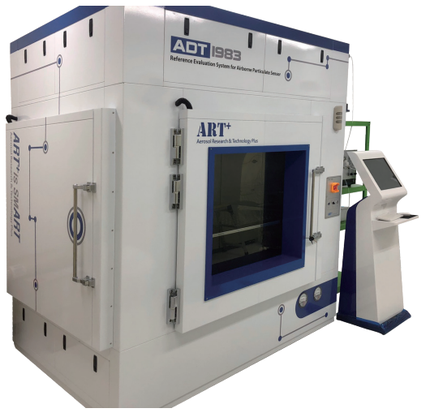
Dust Sensor(PM-2.5) Performance Evaluation System

Features

- Secure particle concentration uniformity in chamber by optimized mixing column and generating system
- Minimize test measurement uncertainty
- Maintain chamber door in lock until test is completed or user decides to end the test to prevent accidents
- Capable of identifying test progress status via warning lights installed outside of test chamber
- Improve user convenience and efficiency by minimizing concentration adjustment time in test concentration sections
- Besides test procedures of initially implemented requirement, provide access to set test concentration and test time to provide expandability as device for fine dust concentration environment research and creating environment
- Automatic test operation and test report storage
- System stand alone control and remote control via external PC

Dust Sensor for Equivalent Verification for Outdoor

- Outdoor test room and equivalency evaluation system is based on 'Air pollution monitoring network installations and operation guidelines' and National Institute of Environmental Research (NIER) affiliated organization of Ministry of Environment 'Installation and operation guidelines for air pollution monitoring stations'
- Measuring equipment for equivalence evaluation is 'type approved' by the Ministry of Environment(Class I, Class II)
- The outdoor test building is constructed in the same way as the installation method of the NIER's "Atmospheric monitoring network" (National Institute of Environmental Research)
- Automatic weighing system minimizes 'Measurement uncertainty by precisely controlling temp./humid. and removing static electricity and particles inside', 'Data processing of more than 100 no. of filters', 'Accommodates more than 100 no. of filters simultaneously', and 'Possible to process large amounts of data'
- Components : Automatic weighing system, ultra fine dust sample collector (sampler type and beta-ray type), precision scale, flow calibration device, outdoor test room and equivalency test facility, spare equipment and accessories



Dust Sensor (PM-2.5) for Repeatability Verification for Indoor

- Chamber large enough to evaluate all 'simplified fine-dust analyzers' sold in South Korea.
  (simple measuring device) sampling flow rate: less than 16.7 L/min)
- Related standard : Ministry of Environment 'Notification 2019-24'

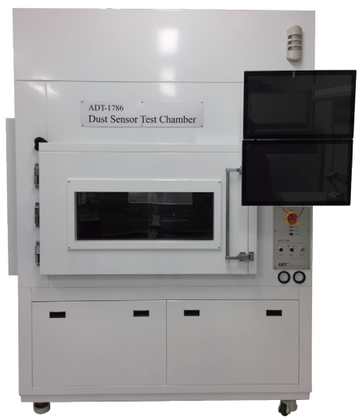
Classification	Specification
External size(WDH)	2,300 x 1,700 x 2,400 mm
Internal size (WDH)	4.1 m^3 (1,600 x 1,600 x 1,600mm) The length of each side can be adjusted within 30%
Particle distribution uniformity	± 10 % (Difference in particle concentration at the center point of each quadrant divided by four of the test surface and 5 measuring points at the center point of the test surface)
Background concentration in chamber	2 $\mu g/m^3$ (up to 30 min)
Maximum sampling flow rate of the test object	~16.7 L/min

General-type Dust Sensor (PM-2.5) Performance Evaluation Tester (ADT-1782)

Classification	Specification	Classification	Specification
External size (WDH)	1,600 x 1,400 x 2,400 mm	Internal size (WDH)	1,000 x 1,000 x 1,000 mm
Test particles	KCl, smoke, dust (User selected)	Control concentration range	10~500 $\mu g/m^3$
Test particle concentration uniformity	± 15 % (@ 50~500 $\mu g/m^3$), ± 5 $\mu g/m^3$ (@ < 50 $\mu g/m^3$)		
Test particle concentration maintained accuracy	± 10 % (@ 50~500 $\mu g/m^3$), ± 5 $\mu g/m^3$ (@ < 50 $\mu g/m^3$)		

Automotive Part-type(Reliability evaluation) Dust Sensor (PM-2.5) Performance Evaluation Tester for Automobile Parts (ADT-1785)

Classification	Specification	Classification	Specification
Chamber size (WDH)	Test section : 600 x 600 x 600 mm External : 1,600 x 2,800 x 2,300 mm		
Test particles	KCl, Cigarette smoke, dust(User optional)	Control concentration range	10~500 $\mu g/m^3$
Test particle concentration uniformity	± 15 % (@ 50~500 $\mu g/m^3$), ± 5 $\mu g/m^3$ (@ < 50 $\mu g/m^3$)		
Temp.	-40 ~ 85 ℃ (±2 ℃)	Humid.	30 ~ 85 % (±5 %) @ 25 ℃, Non-Condensing



Mass Production-type Dust Sensor Performance Evaluation Tester (ADT-1786)

Classification	Specification
External size (WDH)	1,900 x 1,650 x 2,200 mm
Internal size (WDH)	1,300 x 1,300 x 1,000 mm
Test particles	KCl, Smoke, Dust (User selected)
Control concentration range	10~500 $\mu g/m^3$
Test particle concentration uniformity	± 15 % (@ 50~500 $\mu g/m^3$), ± 5 $\mu g/m^3$ (@ < 50 $\mu g/m^3$)
Test particle concentration maintained accuracy	± 10 % (@ 50~500 $\mu g/m^3$), ± 5 $\mu g/m^3$ (@ < 50 $\mu g/m^3$)