



MASK FIT TESTER, Model MT-05U

Quantitative Respirator Fit Tester





SIMPLY A SUPERIOR RESPIRATOR FIT TESTER

Quantitative Respirator Fit Testing(QNFT) is now easier than ever! The SIBATA Mask Fit Tester Model (MT-05U) conforms to OSHA and ANSI protocol and brings a collection of features and benefits never before seen in a marketplace.

SIMPLY ADAPTS

The SIBATA Mask Fit Tester performs on any tight-fitting respirator, including N95s. This also includes:

- + Disposable N/R/P Series, 95/99/100 masks
- + Half-mask
- + Full-face
- + Gas mask
- + PAPR
- + SCBA

SIMPLY INTUITIVE

The SIBATA Mask Fit Tester is completely plug and play— just turn it on and you're ready to go! Step-by-step guides on the full-colour display lead you through the latest OSHA procedures for QNFT.

SIMPLY FASTER

All tests, including N95 and reusable respirators, are completed within the OSHA timings – the fastest in the industry!

SIMPLY STURDIER

Crafted from thin-gauge steel, the SIBATA Mask Fit Tester is designed to last. An integrated carrying handle makes it safe and easy to transport. The entire unit, including the useful mirror, was made with wipe-down decontamination in mind and weighs only 3.0 kg (6.6 lbs).

ONE UNIT, TWO MODES

STANDALONE MODE

The SIBATA Mask Fit Tester is a fully contained, out-of-the-box unit. Operated through the front touch screen, the instrument guides the user through each exercise instruction and displays the results in real-time. Results are logged and can be transferred to a computer later.

COMPUTER MODE

Test results are transferred to your computer in real-time and saved automatically at the end of each test. Both fit test reports (as well as cards) can be printed as required.

OTHER FEATURES

LOWER TOTAL COST OF OWNERSHIP (TCO)

Built to last, the SIBATA Mask Fit Tester is backed by one-year warranty. Since the unit's particle counting technology requires no alcohol, operating expenses are minimized.

FIT TEST AND 'FIT CHECK'!

You've been fit tested, but are you entering a potentially high-hazard area? The SIBATA Mask Fit Tester has a 'Fit Check' mode that quantifies the respirators fit in real-time after you've donned your mask. A fit check guide is available that allows a disposable respirator to be checked for fit as part of a donning procedure.

IT'S QUIET!

The pump on the SIBATA Mask Fit Tester is extremely quiet and only runs during the tests. As a result, the subject enjoys a quieter fit testing experience, while the owner benefits from a longer lasting pump and less maintenance over the life of the instrument.

The particle generator is also very quiet, contributing to a more positive fit testing experience.





Specifications

Technology: Optical Particle Counting
Fit Factor Method: Particle ratio Cout/Cin as defined in OSHA
Masks Tested: NIOSH N-95, N-99 & N-100, half face and full face elastomeric respirators
Fit Factor Range: 1-10,000
Leakage Range: 0-100%
Flow Rate: 1 L/min
Dimensions: W: 210mm (8.3"), D: 240mm (9.4"), H: 232mm (9.1")
Weight: 3.0 kg (6.6 lbs)
Recommended Particle Generation: Ultrasonic
Power: 100-240VAC
Temperature Range: 0-40°C
Factory Recalibration Interval: Annual
Warranty: One year from date of purchase
Computer Requirements: Microsoft Windows 7 OS with Service Pack 1, or Windows 8.1, or Windows 10. One free USB port required for computer connection. Internet connection required to install the software.

Mask Fit Tester Includes: MT-05U Fit Tester, Twin Sampling Tubes x 2, Probe Kit (100 Tests), Probe Tool Kit, HEPA Filter, AC Adapter, and Fit Testing Software.

Optional Accessories:

Probe Kits for Fitting N-95 Masks
 Fit Check Guides for Non-Intrusive Testing of N-95 Masks
 Particle Generator
 Salt Tablets

Spare Parts:

Twin Tubes
 HEPA Filter
 Replacement Probe Tool Kit

Specifications, and appearance described in this document are based on information as of July, 2018. They are subject to change without notice for improvement of the product.
 The color of actual products may differ to that of color in this data sheet.

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Mask Fitting Tester, Model MT-05

Mask Fitting Tester, Model MT-05

Be sure to select the mask that fits to your face, and at the same time be sure to wear it correctly!!!

FIT TEST;

Fit Test means to check the mask that you use for finding correct mask .

You may use the MT-05 for the Fit Test in quantitatively.



FIT CHECK;

Fit Check means to check the way of using daily the mask that you selected by Fit Test, if the fitting way is correct.

MT-05 is usable for the Fit Test in quantitatively.



How it works.

- After it measures the dust concentration inside and outside the mask, it calculates the dust ratio that went into the mask (i.e. Leakage rate in %)
- It counts the particles floating in a general room.
- To make dust measurement inside mask, you use either Tube Joint or Fitness Test Guide.



Important Issue for Wearing Mask

Be sure the mask you wear fits to your face, and at the same time it works effectively as a filter.

At first, Fit Test

There are two kinds of Fit Test, one is a qualitative test such as Saccharine Method, and the other is a quantitative test that MT-05 adopts.

With the MT-05, you may select the suitable mask that fits to your face shape.

Daily check with 'Fit Check' function

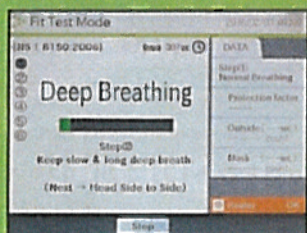
Before start at work, you check the selected mask fitting daily.

What you can do with the MT-05.

You can select the mask that fits to your face.

You can make a quantitative 'Fit Test' with 'Fit Test Mode'!

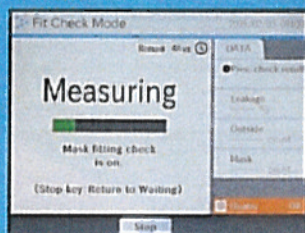
It is the mode to find the mask that fits to your face, by attaching 'Tube Joint' (or using 'Test Guide'), and making specific exercises. It displays the results (Fit Factor or Leakage Rate) by the exercise and or the total exercises.



After you found the mask that fits to your face, you make 'Fit Check' with 'Fit Check Mode' daily!

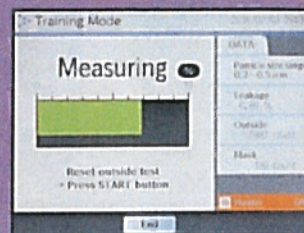
It is the mode to check the mask fitting in about 30 seconds minimum with use of 'test Guide'.

It is appropriate to check the mask fitting daily.



When you have a problem of the mask wearing, you can find the place where mask filtration is not working with the 'Training Mode'!

It is the mode to find and display how many of dust particles sneak into the mask simply and real timely, with tube joint and or test guide. You can read the leakage ratio, that shows how you wear the mask, at a glance in a bar graph. It is suitable to supervise or confirm the mask fitting method.



You are suggested to use MT-05 at the following sites!

Medical Site;

- To find the N95 and other mask that fits to your face
- To train the mask wearing method

Industrial Site;

- To measure the Fit Factor of respiratory protective tool, which you use in the site exposed to indium or refractory ceramic fiber
- To make Fit Check of Mask, before coming to the site wearing the mask

Other Site;

- To give training to the site operator, who needs the training of the mask wearing
- To select the suitable mask that is required at the site where the mask filtration is expected.



Fit Test

There is a quantitative fit test, which has an exercise, for selecting the mask that fits to your face.

In the USA, OSHA 29 CFR 1910.134 is the typical test protocol.

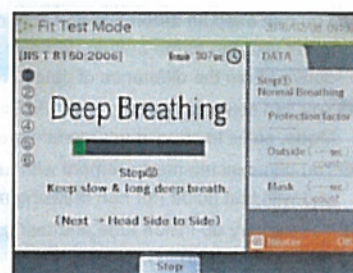
In the 'Fit Test Mode', you may exercise sequentially, and MT-05 displays the fit factor of every preset exercise and total sequent exercises.

Other than OSHA protocol, you may select other protocols such as ANSI/AIHA, JIS.

Test Exercise based on OSHA 29 CFR 1910.134

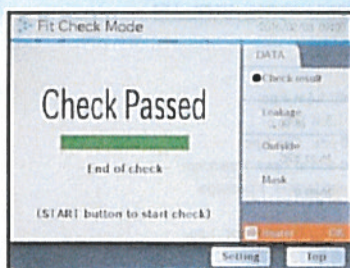
Employers must perform the following exercises for every prescribed fit testing method for every one minute.

- ① Normal breathing
- ② Deep breathing
- ③ Turning head side to side
- ④ Moving head up and down
- ⑤ Talking

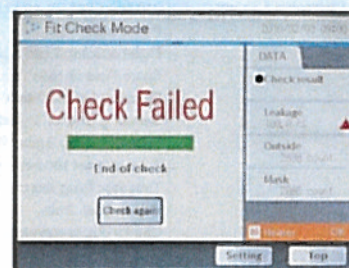


Basic Procedure of 'Fit Check' Exercise

- ① Wear mask and check the fitting.
- ② Insert test guide, connected to the 'MASK' terminal through tube, in between mask and face.
- ③ Check mask fitting again.
- ④ Hold the test guide, connected to the 'OUTSIDE' terminal through tube, closely outside the mask.
- ⑤ Press 'START' button (measuring time is about 30 seconds minimum!).
- ⑥ Pass or Fail message, together with count value and leakage rate, will be displayed.
- ⑦ In case of Fail, check mask fitting again, or change to different mask and measure again.



or



Test Guide

You can start work at site with the mask you checked the fitting, because you did not brake the mask by making holes to the mask.

It is suitable for daily fit check!



Tube Joint sets

In fit test mode, you need to move your body in the testing process. Tube joint set is the tool to make hole to the mask, and to attach tube to the mask.



Decreasing Dew Condensation!

While you measure continuously, inside tube may become dew condensation.

On the side surface of MT-05 drying function, to dry inside the test guide and tube, is incorporated. After the measurements, you are suggested to dry up inside tube from time to time.

MASK FITTING TESTER
MT-05

Features

- You can execute automatic and continuous measurement inside and outside mask with the same built-in detector (particle counter), so as to avoid error derived from the difference of detectors.
- You can select one mode out of Fit Test Mode, Fit Check Mode, and Training Mode, so as to choose appropriate mode according to the purpose.
- You can execute measurement with tube joint set (with making hole to mask), and with test guide (for non breaking mask) as well.
- You can dry up inside tube and test guide, with sucking air pump built on the side surface of MT-05.
- Output interface of RS-232C for measurement data is available
- You can confirm your mask fitting with the attached mirror.

Specifications

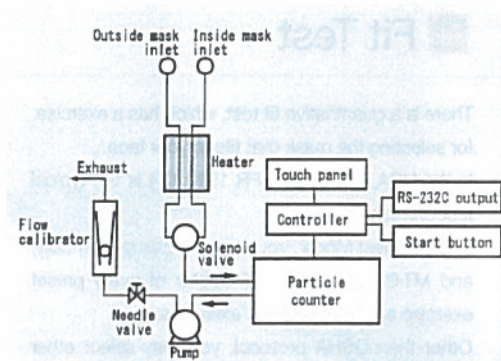
Item code	080200-07
Model name	MT-05
Measurement Object	Assessment of the fitting of mask to one's face
Measurement Item	Number of particles, leakage rate, and fit factor
Measurement theory	Concentration of particle numbers with the Laser Beam Scattering method (Ratio measurement of dust inside room and dust inside mask)
Target particle size	Selection range of over 0.3 micro-meter (μm), over 0.5 μm , from 0.3 to 0.5 μm
Measurement range	Figure range from 0 to 9,999,999 count Leakage range : 0 to 100%, Fit factor: 1 to 10,000
Measurement time	Standard of 10 seconds each for outside and inside mask purge, and 3 seconds each (in total about 26 seconds)
Suction flow rate	1 L/min
Built in functions	Fit factor & leakage rate calculation, Heating tube temperature adjustment, Dryer, RS-232 output
Operating environment	0 to 40 degree Celsius, 30 to 80% RH (with no dew condensation)
Protection device	Fuse (for AC250V, $\phi 5.2 \times 20 \text{ mm}$, 3.15A) *Note 1
Power source	AC 100 to 240V, 50/60 Hz, approx. 0.5A
Dimension & weight	210 (W) x 240 (D) x 232 (H) mm (without protrusion), approx. 3 Kg
Accessories	Power cable 1 pc. Outlet adaptor (2 pin/ 3 pin converter) 1pc. Spare Fuse (3.15A) 1 pc. Sampling tube for 'Mask' (transparent), 1.5m 4 pc. Sampling tube for 'Outside' (Green), 1.5m 1pc. Tube connector 2 pcs., Test guide 10 pcs., Clip 1 pc. Tube joint set 100 pcs each tube joint and stopper 1 package Tube joint fixing tool one each male and female 1 package Cap for Inlet 2 pcs. Cap for output connector 1 pc., Cap for USB connector 1 pc.

*This product is not intrinsically safe type.

*Note1: Time lag fuse shall be applied, and never use fast-blow fuse.

Optional item

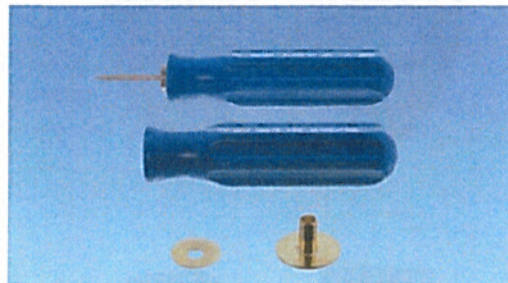
Item code	Item code
080200-062	Test Guide 10 pcs./set
080200-071	Tube 1.5m for Mask Fitting Tester 5pcs./set (Transparent tube 4pcs. And Green tube 1pc.)
080200-072	Tube joint set 100 pairs/set (Tube joint 100 pcs and stopper 100 pcs.)
080200-073	Tube joint fixing tool
A80200-030	External display unit MT-03DU
091600-000414	Printer DPU-414
080200-061	Connection cable for printer
G61860-000419	Printer paper 10 rolls/set



Block Diagram



Test Guide



Tube joint, Tube joint fixing tool



External display unit, MT03DU



Printer, DPU-414



Tubes

- Specifications and appearance described in this document are based on information as of April 2016. ● The color of actual products may differ to that of color in this data sheet.
- Before using the MT-05, you are expected to read the operation manual.

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