GAS TIGHT SUIT TEST EQUIPMENT
AUTOMATIC TEST BOX

RESPIREX™

Description

A computer controlled testing unit that automatically inflates a gas-tight suit from a compressed air supply (max 3.5 bar) and performs a pressure test giving a clear progress/status display and pass or fail indication at the end of the test.

Once a test is started, the process is fully automated and the operator need not be present. The test box displays the result of the test until a new test is started.

Applications

For all users of gas-tight suits

Key Features

- Designed specifically for determining the leak tightness of Respirex gas-tight chemical protection suits (internal pressure test) to the ISO 17491-1:2012 standard as stipulated in EN943-2:2019 and EN943-1:2015+A1:2019.
- Simple to operate with minimal training required
- Reduction in labour costs
- Cannot damage the suit by over inflation
- Single connection to the suit
- Supplied with multi-region power adapter with UK, EU and US cables
- Compliant with the European low voltage and EMC directives
- Data collection available via SD memory card
- Status indication LEDs clearly show current state (inflating & settling [Yellow blinking] testing [solid yellow] & pass [green] or fail [red])

Optional Air Pump

As an option the Automatic Test Box is available with a separate pump which allows suits to be inflated without the need of an external compressed air supply.

- High efficiency motor with low (75w) power consumption
- Long life diaphragm
- Designed for intermittent & continuous duty
- Provides 80l/min at 0.1 bar
- Quiet operation - Noise level 40db
- Dimensions (pump) 210x185x171mm
- Weight (pump) 7kg
- Supplied with 1.8m hose with swivelling connector
- Supplied in a robust carry case

Initial Test Box Set-up

When you first power up the test box you will need to set the date and time before you can conduct a test, to set the date and time follow the instructions below:

Press ➜   This will take you to the screen to set the date and time

Press ➜   This will move the cursor to the first digit of the date

Press ⬆ or ⬇ to adjust the value up or down, press ⬅ or ➜ to move the cursor left or right

Once the time and date are correct move the cursor so that it is under CONFIRM and press ⬆ to accept

The menu will now change to INSERT AN SD CARD TO TRANSFER TEST DATA you can now turn the test box off and then on again to go back to the start screen. Alternatively you can press ⬅ to move the cursor to CANCEL and press ⬆ - you will need to do this four times (to skip the next four menus) to return to the start screen.

Test Box Menu
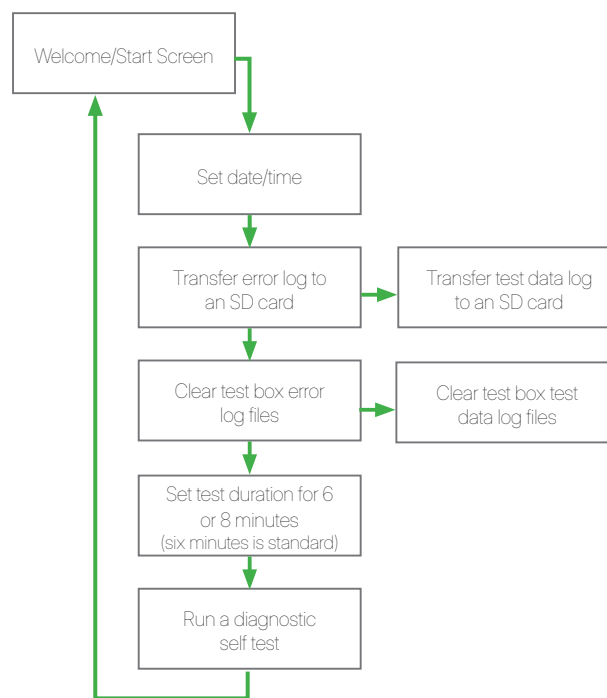
Test Method

1. Lay the suit out as flat as possible, away from any source of heat and/or currents of air. Seal all but one of the exhalation valves with the rubber bungs provided. Visually inspect the suit and remove any creases and folds as far as is practicable. Leave the suit at ambient temperature (20°C ±5°C) for minimum of 1 hour.
2. Connect the test box power supply cable to the test box, and plug the power supply into a mains voltage electrical socket using the appropriate power cable for your region, ensuring the socket is turned on
3. Connect the spiral wrapped suit inflation hose fitted with the exhalation valve test plug to the test box outlet coupling, marked with the suit icon (see below)
4. Connect a suitable compressed air source providing air at a minimum of 15 PSI (1.03 bar) and a maximum of 51 PSI (3.5 bar) to the inlet coupling (this is fitted with the airline coupling specified when the box is ordered).

5. Using a 2mm hexagon key, loosen the screw from the centre of the exhalation valve that has not been sealed with a bung and remove the cap.

6. Carefully stretch the diaphragm over the centre spigot to remove from the exhalation valve body.

7. Push the exhalation valve test plug into the exhalation valve body until sealed

8. Turn on the test box using the black rocker switch on the front panel (marked ⏻). If this is the first time you have used the box you will need to set the date and time - see initial setup instructions below

9. Press the start/stop test button on the front panel (marked ▶/■) to start the test - you can cancel a test at any time by pressing this button again

10. The test box will now inflate the suit to 1750 Pa and let it settle for 10 minutes, maintaining the pressure at 1750 Pa. After 10 minutes the test box will reduce the pressure in the suit to 1650 Pa and monitor the suit for 6 minutes (without adding any air). For a suit to pass the test the pressure drop in the suit must not be more than 300 Pa or 18% (e.g. the final pressure must be ≥1350 Pa).

11. At the end of the test the final pressure reading and temperature will be displayed together with Passed or Failed and either a Red or Green status LED

After completing the test

1. Remove the exhalation valve test plug from the exhalation valve

2. Carefully stretch the diaphragm over the centre spigot making sure that it is correctly orientated and that the hole in the diaphragm is located under the shoulder of the spigot.

3. Replace the exhalation valve cap making sure that the location channel on the cap is located over the location key on the exhalation valve body (the RESPIREX lettering should be at the top when the suit is worn).

4. Remove the other exhalation valve bung(s)

Note

Testing should be conducted in a room with a stable ambient temperature of 20°C (±5°C) / 68°F (±9°F). The automatic test box includes an abient temperature display in degrees Celsius for this reason. Variations in temperature during the test can negatively affect the result.

Supplied With

- 4x Suit bungs to block exhalation valves
- 1x Suit inflation hose with exhalation valve test plug
- 1x Multi-region power adapter with UK, EU and US power leads

Specifications

Product Code	G02700
Weight	6.5kg / 14.3 lbs
Dimensions (LxWxH)	41x34x18 cm / 16.1x13.4x7 in
Inlet Coupling	CJEN Plug (Standard), other couplings on request

RESPIREX™

Living + Breathing Personal Protection