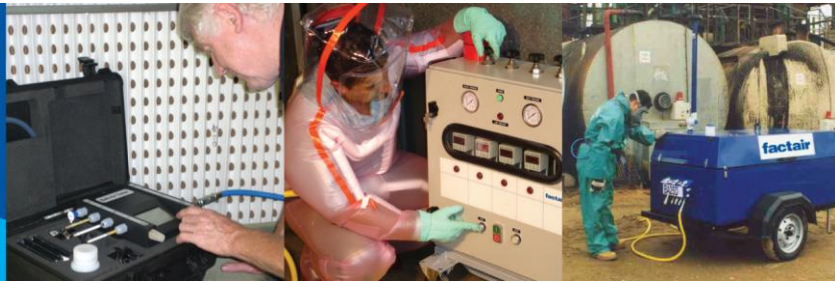


## F4500 Safe-Air Tester For Breathing-Air Systems



The F4500 Safe Air Tester is the latest generation of Factair's market leading air quality testing instruments and enables breathing-air tests to be conducted easily and quickly. This ensures complete compliance with the relevant requirements of COSHH L5.

Mounted within a tough impact and weather resistant PELI case the F4500 unit can be removed from the case and used as a stand-alone unit, where this makes testing more convenient.

F4500 Safe-Air Testers are fitted with internal lithium rechargeable batteries and in addition also have a battery tray which accommodates 6 AA alkaline type batteries. In the event that the rechargeable batteries are not sufficiently recharged then you can continue to use the instrument with either the Alkaline AA batteries or a mains power supply.

The unit features a colour touch screen, menu driven display, making air quality testing both easy and quick to complete, with a typical test taking about 10 minutes.

The detection parameters of EN12021:2014 are met or exceeded during the automatically controlled test by the use of Draeger detector tubes to establish levels of carbon monoxide, carbon dioxide, and water. For oil the instrument can use either the Draeger Impactor or oil tube. The new Draeger Impactor has no glass or hazard components and can test for all known synthetic and mineral oils. An inbuilt electronic sensor measures oxygen content and the percentage concentration is displayed, whilst an electronic flowmeter allows airflows of up to 600 l/min to be verified.



The unit is designed to test low-pressure airline breathing systems but can be used with the F3002 high-pressure regulator assembly to test HP cylinders. Factair's quality accredited instrument workshop provides recalibration and servicing for the unit. In fact a testimony to the robustness and quality of Factair's Safe-Air Testers is that units over 10 years old are still in daily use.

At the end of each test results can be stored within the F4500's memory (up to 20 tests can be stored) and then downloaded via the USB cable into PC compatible software which is available to download from Factair's website. This software provides an easy way to retain and print test results.

## F4500 Safe-Air Tester For Breathing-Air Systems



Safe-Air Tester results download software

Safe Air Tester - [06-Jul-2016 at 16:54]

File Units Language

**Test Info**  
 Test Date: 06 Jul 2016  
 Tester Serial Number: 45001  
 Tester Calibration Date: 01 Jul 2016  
 Tester Model: F4500  
 Test Category: Airline below 40 Bar  
 Location: FACTAIR  
 Oil: Impactor

**Test Result**  
 Overall Result: Fail  
 Next Test Due: 18 Jul 2016  
 Name:   
 Address:

Test Measurements	Reading	Pass/Fail	*Requirements/Notes
Ambient Temperature:	19°C	--	
Test Point Volume:	0 L/min	N/A	** Suitable for RPD
Test Pressure:	5.4 Bar	N/A	** Suitable for RPD
System Pressure:	5.4 Bar	--	
Odour:	OK	Pass	Without significant odour or taste
Oxygen (O2):	20.9 %	Pass	20 - 22% by volume
Carbon Monoxide (CO):	0 ppm	Pass	5ppm (5ml per m3) max
Carbon Dioxide (CO2):	400 ppm	Pass	500ppm (500ml per m3) max
Oil Mist:	0 - 0.1	Pass	Less than 0.5 mg/m3
Water Vapour:	5000 mg/m3	--	
Pressure Dewpoint:	26.5°C	Fail	Must be at least 5°C below ambient

Requirements according to BS EN12021 = \*  
 \*\* = If not applicable (N/A), then certificate covers air quality only.

Sample breathing-air test result certificate

SAFE-AIR

factair

Test Date: 06 Jul 2016  
 Tester Serial Number: 45001  
 Tester Calibration Date: 01 Jul 2016  
 Tester Model: F4500  
 Test Category: Airline below 40 Bar  
 Location: FACTAIR  
 Oil: Impactor

TEST	READING	RESULT	*REQUIREMENTS/NOTES
Ambient Temperature:	19°C	--	
Test Point Volume:	0 L/min	N/A	** Suitable for RPD
Test Pressure:	5.4 Bar	N/A	** Suitable for RPD
System Pressure:	5.4 Bar	--	
Odour:	OK	Pass	Without significant odour or taste
Oxygen (O2):	20.9 %	Pass	20 - 22% by volume
Carbon Monoxide (CO):	0 ppm	Pass	5ppm (5ml per m3) max
Carbon Dioxide (CO2):	400 ppm	Pass	500ppm (500ml per m3) max
Oil Mist:	0 - 0.1	Pass	Less than 0.5 mg/m3
Water Vapour:	5000 mg/m3	--	
Pressure Dewpoint:	26.5°C	Fail	Must be at least 5°C below ambient

\* = Requirements according to BS EN12021

\*\* = If not applicable (N/A), then certificate covers air quality only.

Overall Result: Fail

Next Test Due: 06 Oct 2016

SIGNED:

Service Engineer  
 Factair Ltd  
 49 Boss Hall Road  
 Ipswich  
 Suffolk, IP1 5BN

Name: Service Engineer

DATE: 16 Jul 2016

### DRAEGER DETECTOR TUBES / IMPACTOR

Carbon Monoxide	CO	-ref 6728511	5 -150 ppm
Carbon Dioxide	CO <sub>2</sub>	-ref 6728521	100 - 3000 ppm
Water	H <sub>2</sub> O	-ref 6728531	Selectable range of 5 mg/m <sup>3</sup> – 200 mg/m <sup>3</sup> or 50 mg/m <sup>3</sup> – 2000 mg/m <sup>3</sup> subject to system type
Oil (Impactor)		-ref 8103530	0.1 mg/m <sup>3</sup> – 1.0mg/m <sup>3</sup>
Oil (tube)		-ref 6728371	0.1 mg/m <sup>3</sup> – 1.0mg/m <sup>3</sup>

Oxygen Cell	0 to 30%
Digital Flow Meter	0 to 600 l/min

Model	Width	Length	Height	Weight
F4500	180 mm	470 mm	360 mm	7.5 Kg

## F4500 Safe-Air Tester For Breathing-Air Systems



### Included as standard



F2187 Tube Tip Cutter



F2193 CEJN 342 / Rectus 96 KS  
Connection Adapter



Travel Container for  
Used Detector Tubes



USB A to Male USB B  
Connection Cable

### Accessories



High Pressure Regulator  
Up to 300 bar  
(Included as standard with  
F4501 and F4501 ED)



6728371  
Oil



6728531  
H<sub>2</sub>O



6728511  
CO



6728521  
CO<sub>2</sub>



8103530  
Draeger Oil Impactor

### Other Factair Breathing Air Quality Testing Instruments

#### F4500ED Safe-Air Tester with integral electronic dewpoint meter

To fully automate moisture determination the F4500 can be supplied complete with an integral electronic dewpoint sensor (ED). This unit measures the moisture levels within the breathing air and records the information in pressure or atmospheric dewpoint levels as well as providing the reading in mg/m<sup>3</sup>. This dewpoint meter is specially suited to sample air quality testing ensuring an accurate moisture reading within the standard test time.

Electronic Dewpoint Meter	-65°C to +10°C Pressure Dewpoint
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#### F4501 High Pressure Safe Air Tester

Designed specifically for high pressure systems, the F4501 comes complete with the F3002 regulator to reduce the pressure from a maximum of 300 bar. The F4501 features an odour check facility in the place of the digital flowmeter fitted in the F4500.

#### F4501ED High Pressure Safe Air Tester

As the F4501 but also incorporating the electronic dewpoint sensor.