





# EU Type Examination Certificate

This is to certify that:

FIT Farm Innovation Team GmbH Webereistr. 1a Steinfurt 48565 Germany

Holds Certificate Number:

CE 732725

In respect of:

### Model FIT F246 Protective Face Mask To technical specification to Annex II (EHSR) of the PPE Regulation (EU) 2016/425 PPE for use by healthcare professionals as per Commission recommendation 2020/403

on the basis that BSI carried out the relevant Type Examination procedures under the requirements with the Regulation (EU) 2016/425 of the European Parliament and Council relating to Personal Protective Equipment Regulation (PPE) Annex V (Module B) and meets the relevant health and safety requirements specified in Annex II

For and on behalf of BSI, a Notified Body for the above Regulation (Notified Body Number 2797):

Drs. Dave Hagenaars, Managing Director

First Issued: 2020-10-13 Latest Issue: 2020-10-13 Effective Date: 2020-10-13 Expiry Date: 2021-10-13

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## EU Type Examination Certificate

No. CE 732725

## **Product Specification**

Product Name:	Particulate Respirator.		
Product Type:	Particulate filtering half masks for use by Healthcare professionals.		
Model:	FIT F246		
Classification:	FIT F246 FFP2 NR un-valved		
Technical Specification:	Technical specification to satisfy Annex II of the PPE Regulation (EU) 2016/425.		
Product Description:	The FIT F246 respirator is non-reusable, secured to the face of the user by a pair of adjustable ear straps, and has no exhalation valve The respirators are FFP2 class, fold flat type.		
	The respirator listed on this certificate is for use by healthcare workers, first responders and other personnel involved in the efforts to contain the COVID-19 virus and avoid its further spread.		
	The product covered by this certificate is not approved for industrial applications and the certificate is only valid as long as EU Commission recommendation sheet 2020/403 remains applicable.		
Product Assessments:	BSI's PPE for Healthcare Professionals 2020/403 – RPE Technical Specification.		

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## EU Type Examination Certificate

No. CE 732725

### **Certificate Administration Details**

Technical File Reference: MP20200727 revision 2

### **Certificate Amendment Record:**

Issue date	Comments	BSI Review No.		
Oct 2020	First issue, rev. 01	2797:20:3257528		

### **Certificate validity**

The Certificate holder is responsible for ensuring that the Notified Body is advised of changes to any aspect of the overall process utilised in the manufacture of the product, failure to do so could invalidate the Certificate in respect of product manufactured following the introduction of such changes.

The validity of the Certificate for the products is also dependent on the maintenance of the EU Conformity to Type based on Internal Production Control plus supervised product checks at random intervals, Annex VII (Module C2) as referenced on BSI issued Certificate CE 732726.

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# Conformity to Type based on Internal Production Control plus supervised product checks at random intervals

This is to certify that:

FIT Farm Innovation Team GmbH Webereistr. 1a Steinfurt 48565 Germany

Holds Certificate Number:

CE 732726

In respect of:

For the manufacture of particulate respirators to technical specification to satisfy Annex II of the PPE Regulation (EU) 2016/425.

on the basis that BSI carried out the supervised production checks at random intervals under the requirements with the Regulation (EU) 2016/425 of the European Parliament and Council relating to Personal Protective Equipment Regulation (PPE) Annex VII (Module C2)

For and on behalf of BSI, a Notified Body for the above Regulation (Notified Body Number 2797):

Drs. Dave Hagenaars, Managing Director

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## Conformity to Type based on Internal Production Control plus supervised product checks at random intervals

No. CE 732726

### **Product manufactured by:**

FIT Farm Innovation Team GmbH Webereistr. 1a Steinfurt 48565 Germany

#### **Product details**

The respiratory protective device covered by the scope of this Module C2 Certificate and the Technical Specification to which the product is manufactured are as follows:

Product type:	Particulate filtering half masks for use by Healthcare professionals.		
Model and classifications:	FIT F246 FFP2 NR		
Technical Specification:	Technical specification to satisfy Annex II of the PPE Regulation (EU) 2016/425. BSI's PPE for Healthcare Professionals 2020/403 – RPE Technical Specification.		

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## Conformity to Type based on Internal Production Control plus supervised product checks at random intervals

No. CE 732726

## **Certificate Administration Details:**

## Certificate Amendment Record and BSI internal Review relating to this Certificate

Issue date Comments		<b>BSI Review No.</b>	
Oct 2020	First issue, rev. 01	2797:20:3257529	

## **Certificate validity**

The Certificate holder is responsible for ensuring that the Notified Body is advised of changes to any aspects of the overall quality system utilized in the manufacture of the products, failure to do so could invalidate the Certificate in respect of product manufactured after the introduction of such changes.

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3257526 - Test Report.

# Test Report 3257526. FIT Farm Innovation Team GmbH

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## Introduction.

This report has been prepared by Paul Waller and relates to the activity detailed below:

Job/Registration Details		Client Details	
Job number: Job type: Start Date: Test type: Sample ID: Registration: Scheme: Protocol: Scheme Manager:	3257526 Testing Samples Submitted 05/07/2020 Type 10191543 and 10192171 CE 732725 Positive pressure RPE PP123 Nathan Shipley	FIT Farm Innovation Team GmbH Webereistrasse 1a Steinfurt 48565 Germany	

The report has been approved for issue by T Wicksey – Senior Test Engineer

Approved For Issue	
Zh	
	Issue Date: 1 October 2020

## Objectives.

This is an independent type test evaluation to only certain clauses or sub-clauses of the agreed specification in accordance with the following test programme:

BSI COVID-19 filtering face piece technical specification, for COVID-19 masks for use by healthcare workers

## Product Scope.

COVID-19 masks for use by healthcare workers

## Report Summary.

The samples were received on 27 July 2020 and the testing was started on 5 August 2020.

The samples submitted complied with the requirements of the test work conducted.



# Test Samples.

Sample ID	ER Number	Description
1 to 19	10191543 and 10192171	Model: FIT245

# Description of Test Samples.

Sample Description	s
OVID-19 masks for use by healthcare workers:	С
1odel: FIT245	M



## Test Requirements.

## Testing in accordance with BSI COVID-19 filtering face piece technical specification

Technical testing	specification for COVID-19	masks for use by	healthcare workers

Performance requirement	EN 149:2001+A1:2009 Test method clause	Requirement	Assessment
<b>7.7 Practical performance</b> The particle filtering half mask shall undergo practical performance tests under realistic conditions. These general tests serve the purpose of checking the equipment for imperfections that cannot be determined by the tests described elsewhere in this standard. Where practical performance tests show the apparatus has imperfections related to wearer's acceptance, the test house shall provide full details of those parts of the practical performance tests which revealed these imperfections. <i>2 test subjects, masks tested 'As</i>	Testing shall be done in accordance with 8.4.	During the tests the particle filtering half mask shall be subjectively assessed by the wearer and after the test, comments on the following shall be recorded: a) head harness comfort; b) security of fastenings; c) field of vision; d) any other comments reported by the wearer on request.	Pass
<i>received'</i> <b>7.9 Leakage</b> <b>7.9.1 Total inward leakage</b> <i>3 or 5 subjects with samples AR</i> <i>(see criteria)</i>	Testing shall be done in accordance with 8.5.	Test 3 subjects - If the 3 tests produce results between 6% and 8% mean or individual results over 11%, test 5 subjects If 5 tests undertaken; 23 of the 25 individual exercise results tests shall be not greater than 11 % (for FFP2) and, in addition, 4 of the 5 arithmetic means for the total inward leakage shall be not greater than 8 % (for FFP2)	Pass
7.9 Leakage 7.9.2 Penetration of filter material 3 test samples masks tested 'As received', for NaCl (Sodium Chloride) and PO (Paraffin oil), 3min test 7.12 Carbon dioxide content of	Testing shall be done in accordance with 8.11 Testing shall be done in	6% for both PO and NaCl	Pass
<i>the inhalation air</i> <i>3 test samples, masks tested 'As</i> <i>received'</i>	accordance with 8.7.	inhalation air (dead space) shall not exceed an average of 1.0 % (by volume).	Pass
<b>7.16 Breathing resistance</b> <i>3 test samples, masks tested 'As received'</i>	Testing shall be done in accordance with 8.9	The breathing resistances shall meet the requirements of; 30l/min – 0.7mbar (inhale) 95l/min – 2.4mbar (inhale) 160l/min – 3.0mbar (exhale)	Pass

## Glossary of Terms.

Pass: Complies. Tested by BSI engineers at BSI laboratories
Pass 1: Complies. Witnessed by BSI engineers in manufacturers laboratory.
Pass 2: Complies. Tests carried out by third party lab; results accepted by BSI.
Pass\*: Report resulted in uncertainty and states that Compliance is more probable than non-compliance.
Fail: Non-compliance. Product does not meet the requirements of this clause.
Fail\*: Report resulted in uncertainty and states that Non-compliance is more probable than compliance.
N/T: Not Tested
N/A: Not Applicable
AR: As Received
TC: Temperature Conditioned
SW: Simulated Wear
FT: Flow Tested
MS: Mechanical strength
MMDF: Manufactures Minimum Design Flow
MMDC: Manufactures Minimum Design Condition

# Conditions of Issue.

This Test Report is issued subject to the conditions stated in current issue of 'BSI Terms of Service'. The results contained herein apply only to the particular sample(s) tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of BSI, who reserve the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.

Should you wish to speak with BSI in relation to this report, please contact Customer Services on +44 (0)8450 80 9000.

BSI Kitemark House Maylands Avenue Hemel Hempstead Hertfordshire HP2 4SQ



Opinions and Interpretations expressed herein are outside the scope of our UKAS accreditation. Unless otherwise stated, any results not obtained from testing in a BSI laboratory are outside the scope of our UKAS accreditation.



## Test Results.

## Testing in accordance with BSI COVID-19 filtering face piece technical specification

BS EN 149:2001 +A1:2009 Technical testing specification for COVID-19 masks for use by healthcare workers

CLAUSE	REQUIREMENTS	ASSESSMENT
7.7	Practical performance	
	The particle filtering half mask shall undergo practical performance tests under realistic conditions. These general tests serve the purpose of checking the equipment for imperfections that cannot be determined by the tests described elsewhere in this standard.	
	Where practical performance tests show the apparatus has imperfections related to wearer's acceptance, the test house shall provide full details of those parts of the practical performance tests which revealed these imperfections.	
	Test in accordance with clause 8.4 of the standard.	Pass
	<b>Testing in accordance with BSI COVID-19 filtering face piece technical</b> <b>specification, for masks for use by healthcare workers</b> During the tests the particle filtering half mask shall be subjectively assessed by the wearer and after the test, comments on the following shall be recorded: a) head harness comfort; b) security of fastenings; c) field of vision; d) any other comments reported by the wearer on request.	
hle A. Pract	ical performance	

#### Table A: Practical performance

Test candidate Sample		Comments				
		Head harness comfort	Security of fastenings	Field of vision	Any other comments	Assessment
AH1	1 AR	ОК	ОК	ОК	None	Pass
JS2	2 AR	ОК	ОК	ОК	None	Pass

# Test Results.

CLAUSE	REQUIREMENTS	ASSESSMENT
7.9	Leakage	
7.9.1	Total inward leakage The laboratory tests shall indicate that the particle filtering half mask can be used by the wearer to protect with high probability against the potential hazard to be expected. The total inward leakage consists of three components: face seal leakage, exhalation valve leakage (if exhalation valve fitted) and filter penetration.	
	Test in accordance with clause 8.5 of the standard.	

# *Testing in accordance with BSI COVID-19 filtering face piece technical specification, for masks for use by healthcare workers*

Pass

Test 3 subjects - If the 3 tests produce results between 6% and 8% mean or individual results over 11%, test 5 subjects

If 5 tests undertaken; 23 of the 25 individual exercise results tests shall be not greater than 11 % (for FFP2) and, in addition, 4 of the 5 arithmetic means for the total inward leakage shall be not greater than 8 % (for FFP2)

 Table B: Clause 7.9.1 - Total inward leakage

			Inward Leakage (%)						
Test	Sample	Sample Pre test	Α	В	С	D	Е		
candidate	Sample	condition	Walking	Walking with head side to side	Walking with head up & down	Walking and talking	Walking	Average	Assessment
LM2	3	AR	0.3778	0.2582	0.3776	0.3413	0.2450	0.3200	Pass
AH1	4	AR	3.4787	3.2078	3.1087	3.3079	3.5526	3.3311	Pass
JS3	5	AR	5.9583	6.3734	5.8326	0.9316	1.9678	4.2127	Pass





# Test Results. (Continued)

## CLAUSE REQUIREMENTS

### 7.9.2 Penetration of filter material

# *Testing in accordance with BSI COVID-19 filtering face piece technical specification, for masks for use by healthcare workers*

3 test samples masks tested 'As received', for NaCl (Sodium Chloride) and PO (Paraffin oil), 3 min test. Testing shall be done in accordance with 8.11. 6% limit for both PO and NaCl Pass

ASSESSMENT

 Table C: Clause 8.11 - Sodium Chloride penetration test

Sample	Pre-test	Flow through filter (I/min)	Penetration (%)		
number	condition		Limit	Actual	
8	AR			2.304	
9	AR	95	< 6	0.265	
10	AR			0.257	

### Table D: Clause 8.11 - Paraffin oil penetration test

and a second sec	Pre-test	Flow through filter (I/min)	Penetration (%)		
	condition		Limit	Actual	
11	AR			4.026	
12	AR	95	< 6	3.496	
13	AR			1.583	

## 7.12 Carbon dioxide content of inhalation air

The carbon dioxide content of the inhalation air (dead space) shall not exceed an average of 1.0% (by volume).

Test in accordance with clause 8.7 of the standard.

#### Table E: Clause 8.7 - Carbon Dioxide content of the inhalation air

Sample	Pre-test condition	Dead space CO <sub>2</sub> (%)		
	Pre-test condition	Limit	Measured	
14	AR		0.50	
15	AR	< 1.0	0.50	
16	AR		0.50	

Pass

## 3257526 - Test Report.

# Test Results. (Continued)

CLAUSE	REQUIREMENTS	ASSESSMENT
7.16	Breathing resistance	
	Testing in accordance with RSI COVID-10 filtering face piece technical	

## Testing in accordance with BSI COVID-19 filtering face piece technical specification, for masks for use by healthcare workers

3 test samples masks tested 'As received'. Test in accordance with clause 8.9 of the standard.

Pass

The breathing resistances shall meet the requirements of FFP2; 30l/min – 0.7mbar (inhale), 95l/min – 2.4mbar (inhale), 160l/min – 3.0mbar (exhale)

Table F: Clause	8.9 – Breathing r	resistance. In	halation	resistance at a	continuous flow

Sample	Pre-test	Continuous flow	Inhalation resistance (mbar)		
Sample	condition	(l/min)	Limit	Measured	
17	AR			0.48	
18	AR	30	< 0.7	0.42	
19	AR			0.35	
17	AR			1.59	
18	AR	95	< 2.4	1.45	
19	AR		_	1.18	

Table G: Clause 8.9 - Breathing resistance. Exhalation resistance at a continuous flow, measured in five orientations with the worst case reported

Sample	Pre-test	Continuous flow	Exhalation resistance (mbar)		
	condition	(I/min)	Limit	Measured	
17	AR	160		2.42	
18	AR		< 3.0	2.22	
19	AR			1.59	

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## Appendix A. – Test Panel Data

Test Candidate	Facial Dimensions (mm)						
	Length of face	Width of face	Face depth	Width of mouth	Head Circumference	Sex	
LM2	110	148	125	44	589	Male	
AH1	108	124	130	46	570	Male	
JS3	126	134	124	49	600	Male	
JS2	126	142	125	57	575	Male	

Note: All candidates were clean shaven

## Product photographs.



Front view



Side view



Inside view \*\*\* End of Report \*\*\*

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