



# Fit Testing

WHITE PAPER

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**PADM** Medical

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# Backstory: What is Precision AIR

*Precision AIR is a reusable elastomeric half-mask respirator designed specifically for medical environments with easy clean surfaces. One of the most important aspects of using an elastomeric respirator is proper fit. Precision AIR meets or exceeds face panel requirements CAN/CSA Z94.4-11 per TEB-APR-STP-0005-A05-05A-06.*



Precision ADM Medical Inc. (PADM Medical) developed the Precision AIR reusable elastomeric respirator after a call from the Canadian Government to manufacturers, and produced it with healthcare provider feedback in mind. Precision AIR has successfully been implemented in Canadian hospital systems.

Precision AIR is a reusable respirator mask with disposable filters and was commercialized by PADM Medical. This respirator offers organizations an innovative, sustainable product that lowers personal protection costs.

Fit testing pass rate is important information to gather and share as an organization. Fit testing may be qualitative, with sensory perception measured while wearing respirator<sup>1</sup>. Fit testing may be quantitative as well. Quantitative testing uses a specific instrument to measure fit. PADM Medical researchers utilized a quantitative approach to fit testing and training<sup>3</sup>.

## Outcomes

Third-party fit testers and PADM Medical engineers utilized a measurement system of users faces to estimate respirator model to fit test. Sizes tested range across all the required sizes of 1-10 for NIOSH respirator size<sup>5</sup>. Fit test pass rate was 94% overall. 100% fit test pass rate, S/M and 80% M/L (see Table 1).

## Recommendation

NIOSH requires a value of >100 fit factor to indicate sufficient fit<sup>6</sup>.

1. Complete initial fit testing.
2. Train users using Fit Testing Training<sup>3</sup> and local hospital/organization recommendations.
3. Users continue to follow IFU for seal check with every use, as with any respirator level device used<sup>4,5</sup>.

Catalogue ID	Subject	NIOSH Panel #	Face Width	Face Height	Test Date	Fit Factor
AIRO1-SM-95PFE	1	1	112	107	12/29/2020	200+
AIRO1-SM-95PFE	3	2	134	108	05/14/2021	200+
AIRO1-SM-95PFE	5	3	129	112	01/11/2021	200+
AIRO1-SM-95PFE	4	3	124	112	04/28/2021	200+
AIRO1-SM-95PFE	31	3	130	113	05/14/2021	200+
AIRO1-SM-95PFE	7	4	133	109	04/28/2021	200+
AIRO1-SM-95PFE	32	4	140	110	05/14/2021	200+
AIRO1-SM-95PFE	15	6	111	119	12/29/2020	200+
AIRO1-SM-95PFE	33	6	132	124	05/14/2021	200+
AIRO1-SM-95PFE	20	7	135	125	03/24/2021	200+
AIRO1-ML-95PFE	1	1	112	107	9/25/2020	0
AIRO1-ML-95PFE	2	1	125	105	10/01/2020	200+
AIRO1-ML-95PFE	3	2	134	108	9/25/2020	0
AIRO1-ML-95PFE	4	3	124	112	9/25/2020	0
AIRO1-ML-95PFE	5	3	129	112	9/28/2020	171
AIRO1-ML-95PFE	6	4	133	109	9/25/2020	0
AIRO1-ML-95PFE	7	4	133	109	9/25/2020	0
AIRO1-ML-95PFE	8	4	139	118	9/25/2020	180
AIRO1-ML-95PFE	9	4	135	115	9/25/2020	200+
AIRO1-ML-95PFE	10	4	135	117	10/01/2020	200+
AIRO1-ML-95PFE	11	4	137	115	05/14/2021	200+
AIRO1-ML-95PFE	12	5	146	116	9/25/2020	200+
AIRO1-ML-95PFE	13	5	145	112	10/01/2020	200+
AIRO1-ML-95PFE	14	6	130	121	9/28/2020	127
AIRO1-ML-95PFE	15	6	111	119	10/01/2020	143
AIRO1-ML-95PFE	16	7	138	127	9/25/2020	200+
AIRO1-ML-95PFE	17	7	136	127	9/28/2020	200+
AIRO1-ML-95PFE	18	7	142	119	9/28/2020	200+
AIRO1-ML-95PFE	19	7	138	123	10/05/2020	200+
AIRO1-ML-95PFE	20	7	135	125	01/11/2021	200+
AIRO1-ML-95PFE	21	7	142	125	02/19/2021	200+
AIRO1-ML-95PFE	22	7	146	122	02/24/2021	200+
AIRO1-ML-95PFE	23	8	147	122	9/25/2020	0
AIRO1-ML-95PFE	24	8	147	125	10/01/2020	200+
AIRO1-ML-95PFE	25	8	137	131	10/09/2020	200+
AIRO1-ML-95PFE	26	8	148	122	02/19/2021	200+
AIRO1-ML-95PFE	27	9	143	134	9/28/2020	200+
AIRO1-ML-95PFE	28	10	153	130	9/28/2020	200+
AIRO1-ML-95PFE	29	10	163	136	10/01/2020	179
AIRO1-ML-95PFE	30	10	158	129	02/19/2021	200+

Table 1: Data from initial fit testing



**References:**

1. CDC. (2021). [Ancillary Respirator Information: Fit Testing](#).
2. PADM Medical Fit Testing Training. Training Deployment Team.
3. [Precision AIR Instructional Donning Video](#).
4. PADM Medical Fit Testing IFU. 20053-IFU-FITTESTING REV 01.
5. OSHA. (2021). [User seal check 1910.134 App B-1 - User Seal Check Procedures \(Mandatory\)](#).
6. Coffey, C. and Wassel, J. (2013). [Variability of respirator fit test panels-NIOSH study results](#).

For more information, please visit [www.padmmedical.com](http://www.padmmedical.com)

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