

# **Product Data**

# OptiClean\*

## Fig. 1 – OptiClean<sup>TM</sup> Negative Air Machine and Air Scrubber

The OptiClean<sup>TM</sup> negative air machine is a portable solution primarily designed to help convert normal hospital rooms into Airborne Infectious Isolation (AII) rooms. Designed to ASHRAE's Standard 170 for Ventilation of Health Care Facilities, the OptiClean<sup>TM</sup> uses highly efficient filters and a heavy duty, yet quiet, motor to remove contaminated air from the room. The resulting negative air pressure, or "vacuum effect," helps limit the spread of air-based contaminants into surrounding areas.

If negative pressure is not required, such as in an open-air, temporary hospital, a business location or home, the machine can be used as an air "scrubber," pulling air in, removing many contaminants, and discharging cleaner air back into the room.

The unit can be operated either vertically as shown, or horizontally.

### STANDARD FEATURES

- 99.97% efficient long-life HEPA filter removes particles as small as 0.3 microns
- · Standard MERV 7 or higher pre-filter
- · Minimum 200 CFM, Maximum 1500 CFM
- Meets or exceeds ASHRAE Standard 170: Ventilation of Health Care Facilities
- Vertical design for smaller footprint compared to many competitors, and can be mounted and operated horizontally when necessary
- · Portable and adaptable to nearly any location
- · Heavy duty locking casters for easy and smooth transport
- HEPA filter rack and sealing design meet air leakage requirement
- Red lighted indicator to alert user when filters are overloaded (generally means pre-filter requires replacement)
- Green ON/OFF switch illuminates to verify when running
- · 3-second motor start delay
- 3-speed selector switch on 006 and 015 models for various air flow ranges
- 10-foot long power cord with strain relief
- 115V
- Galvanized steel, pre-painted cabinet is fully insulated
- Exhaust transition plate to standard 10-inch round (005/006 sizes) or 12-inch oval (015 size) duct included
- UL® Listed
- · One year limited warranty



Fig. 2 – Room Setup Example for Negative Air

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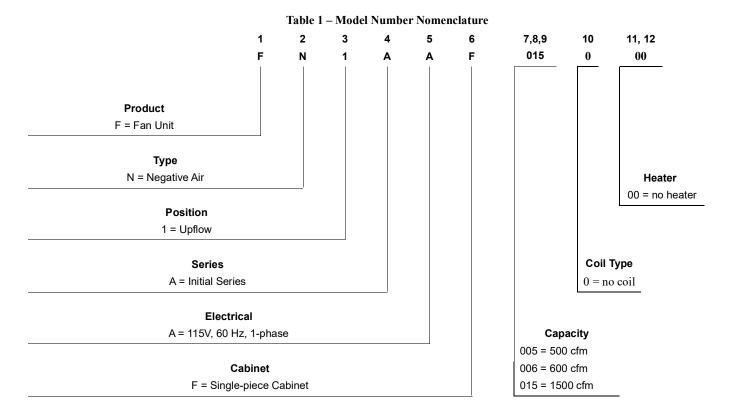


Table 2 - FN1AAF Basic Dimensional Data

Model Size		Dimensions- inches (mm)		Unit Operating Weight
Model Size	Height <sup>*</sup>	Width	Depth	lbs (kg)
005, 006	49-5/8 (1260.5)	17-5/8 (447.7)	22-1/16 (560.4)	125 (56.7)
015	53-7/16 (1357.3)	21-1/8 (536.6)	22-1/16 (560.4)	150 (68.0)

<sup>\*.</sup> Height without casters. Add 3-5/8" (92.1 mm) when casters installed

Table 3 – Specifications

	005, 006 Size	015 Size					
Air Discharge	Ver	tical					
Air Intake Dimension (thru bottom) - in. (mm)	15-1/2 x 19-13/16 (387 x 503)	19 x 19-13/16 (483 x 503)					
Blower Type	Direct	Drive					
CFM (Nominal)	500	500 / 1000 / 1500					
Motor Type	ECM						
Motor HP	1/3 or 3/4	1.0					
Rated RPM	15	00					
	FILTERS (in.)						
Factory Installed - in.	Pre-Filter - 16 x 20 x 2 HEPA - 16 x 20 x 12						
	ELECTRICAL DATA						
Voltage	Voltage 115						
Hertz	6	60					
Amps	5.0 12.0						

External Static Pressure (ESP)	0.1	0.2	0.3	0.4	0.5	0.6
Actual Flow (CFM)	613	598	583	568	554	539

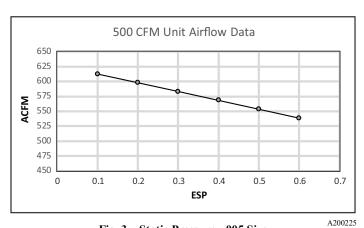


Fig. 3 – Static Pressure - 005 Size

Airflow based upon clean pre-filter at 115V with factory-approved HEPA filter. Measured with 10 feet of flex duct installed.

	Unit Airflow Data (CFM)												
Switch Setting Motor Tap External Static Pressure (ESP)													
Switch Setting	Number 0.01* 0.1 0.2 0.3 0.4 0.5 0.6												
Alternate 1	5	731	706	685	664	643	624	606					
High	4	524	496	471	446	419	394	370					
Medium	3	428	396	367	335	309	280	254					
Alternate 2 2 350 320 287 254 224 195													
Low	1	248	216	179	140								
* CFM with acc	1				140								

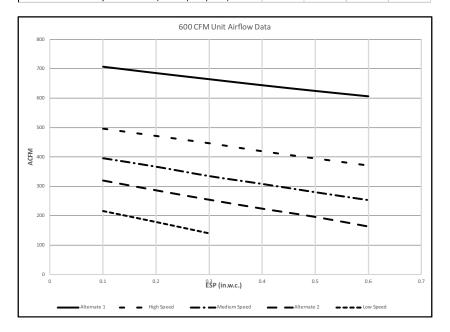


Fig. 4 – Static Pressure - 006 Size

		Un	it Airflov	v Data (	CFM)							
Switch Setting Motor Tap External Static Pressure (ESP)												
Switch Setting	Number 0.01* 0.1 0.2 0.3 0.4 0.5 0.6											
Alternate 1	5	1462	1342	1315	1289	1264	1238	1212				
High	4	1280	1201	1179	1158	1139	1117	1097				
Medium	3	1104	1037	1013	992	967	946	924				
Alternate 2 2 885 826 798 772 745 717												
Low	1	637	583	552	522	487	454	422				
* CEM with acc	ressony Air D	iffuser (no a	·e)									

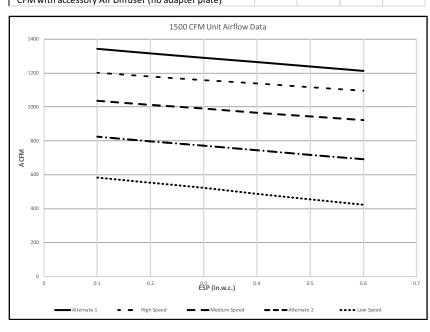


Fig. 5 – Static Pressure - 015 Size

1. Airflow based upon clean pre-filter at 115V with factory-approved HEPA filter.

2.Measured with adapter plate installed

A200253A

A200420A

### **High-Altitude Adjustment**

Depending on your location, you may see up to 10% increase of measured airflow at higher altitudes. To compensate, you can change motor taps for alternate airflows. See instructions in the Operation and Maintenance Manual.

Table 4 - Sound vs Airflow Data

		Tuble	. Sound is inition i	- · · · · ·									
			005 Model										
Motor Tap*	Switch Position	Nominal Airflow <sup>†</sup>	as NAM (dB)	as Scrubber (dB)	with Accessory Diffuser (dB)								
1		375	48	54	51								
2		425	51	57	54								
3	Factory Setting	500	53	59	57								
4		575	55	61	59								
5		600	55	62	60								
	006 Model												
Motor Tap	Switch Position	Airflow	as NAM (dB)	as Scrubber (dB)	with Accessory Diffuser (dB)								
1	Low	200	39	41	39								
2		300	43	46	43								
3	Medium	400	45	49	46								
4	High	500	49	52	50								
5		700	51	58	56								
			015 Model										
Motor Tap	Switch Position	Airflow	as NAM (dB)	as Scrubber (dB)	with Accessory Diffuser (dB)								
1	Low	600	51	53	49								
2		800	56	59	55								
3	Medium	1050	60	63	59								
4	High	1200	61	65	62								
5		1350	61	67	64								

<sup>\*.</sup> The factory-set low and medium airflow can be moved to Speed Tap 2 or Speed Tap 5 airflow respectively, by removing the upper panel and moving the motor pin selection. Refer to Operation and Maintenance manual for procedure.

†. Airflow measured at 0.10 ESP (external static pressure). For other ESP values, see Static Pressure tables above.

**Table 5 – Octave Band Sound Data** 

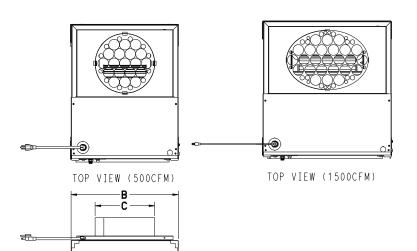
		Negativ	e Air Mac	hine Mode	•		Air	Scrubber I	Mode with	Adaptor P	late		Air Scrubb	er Mode — v	with Air Diffu	ser
	Hz	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
	OA (dB(A))	48	51	53	55	55	54	57	59	61	62	51	54	57	59	60
	Octave (dB(A))	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
	125	41.3	44.6	46.9	48.6	48.3	42.0	44.7	46.9	49.0	49.8	43.4	46.3	48.6	50.5	51.4
005	250	42.3	45.2	47.0	48.5	49.1	44.8	47.1	49.2	50.9	51.5	44.3	47.1	49.4	51.2	51.8
SIZE	500	41.8	44.3	46.3	47.6	48.6	47.1	49.7	51.8	53.4	54.0	43.7	46.2	48.6	50.5	51.2
	1000	40.3	42.9	45.0	46.4	46.7	48.9	51.4	53.4	55.2	55.9	43.3	46.3	49.1	51.2	52.1
	2000	38.3	41.0	43.3	44.5	45.0	48.2	50.9	53.2	55.0	55.6	43.2	46.3	49.2	51.3	52.1
	4000	32.6	35.8	38.3	39.8	40.4	44.4	47.7	50.3	52.3	53.0	40.7	44.3	47.6	50.0	50.9
	8000	23.4	26.2	28.7	30.8	31.5	34.6	38.4	41.6	44.1	45.1	32.1	35.8	39.1	41.7	42.6
	Hz	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
	OA (dB(A))	39	43	46	49	51	41	46	49	52	58	39	43	46	50	56
							12			1			1 1			
	Octave (dB(A))	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
006	125	31.8	35.2	38.2	42.2	45.0	31.3	34.6	37.4	40.9	46.5	31.1	35.0	37.9	41.7	48.2
SIZE	250	32.7	36.6	38.9	41.8	46.1	34.1	38.0	40.3	43.2	49.3	34.0	37.7	40.1	43.2	49.7
	500	32.7	36.5	39.0	41.7	43.4	35.2	39.8	42.2	45.2	49.9	32.1	36.0	38.6	41.9	47.8
	1000	29.8	34.9	37.7	40.7	42.5	35.3	40.8	43.9	47.5	52.3	28.9	34.2	37.4	41.4	48.0
	2000	26.8	32.8	35.9	39.4	41.3	31.8	38.3	41.7	45.7	50.9	27.2	33.4	37.0	41.4	48.3
	4000	22.5	28.1	31.9	35.8	37.9	25.1	31.7	36.1	40.8	47.1	23.7	29.8	34.1	39.1	47.2
	8000	20.4	21.6	23.8	27.2	29.2	20.6	23.3	26.9	31.7	38.8	20.5	22.5	25.5	30.1	38.5
	Hz	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
	OA (dB(A))	51	56	60	61	61	53	59	63	65	67	49	55	59	62	64
	OA (ub(A))	31	- 50	00	01	01	33	33	00	00	07	73	55		UZ.	
	Octave (dB(A))	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5
	125	44.5	49.9	54.1	55.2	55.4	42.7	48.6	52.9	55.2	55.9	43.1	49.1	52.9	55.0	56.1
015	250	44.2	49.2	52.9	54.4	54.5	45.3	50.6	55.0	57.1	57.7	43.7	48.8	52.6	54.7	56.6
SIZE	500	42.5	47.2	51.0	52.3	52.4	46.2	50.9	55.6	57.6	59.5	40.6	46.1	50.3	53.0	55.1
	1000	42.8	48.1	52.0	53.5	53.6	47.5	52.6	57.5	59.4	61.1	40.1	46.6	51.1	54.0	56.7
	2000	40.7	46.1	50.1	51.5	51.7	46.4	51.6	56.4	58.4	60.7	40.2	46.6	50.9	53.9	56.7
	4000	35.9	42.3	46.7	48.3	48.3	41.2	48.0	52.8	55.4	57.8	37.6	45.1	50.1	53.8	56.1
	8000	27.8	35.6	41.6	43.4	43.4	31.1	39.1	44.9	48.4	50.4	27.9	35.4	41.6	46.3	48.6

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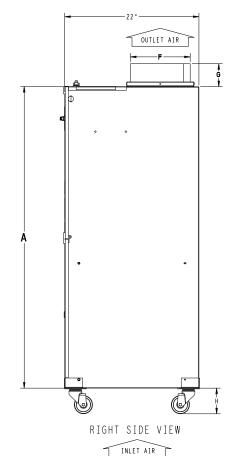
INLET AIR

FRONT VIEW

# FN1AAF 005 Size Detailed Dimensions - English



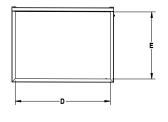
UNIT	SERIES	ELECTRICAL CHARACTERSTICS		ELECTRICAL CHARACTERSTI			A	В		С	D	E	F	G	Н	SHIPPING WT (LBS)
FN1AAF005000	A	Х			49	5/8"	17 5	/8"	10"	15 1/2	19 13/16"	10"	3 3/4"	3 5/8"	125	
		0.														



X=YES O=NO

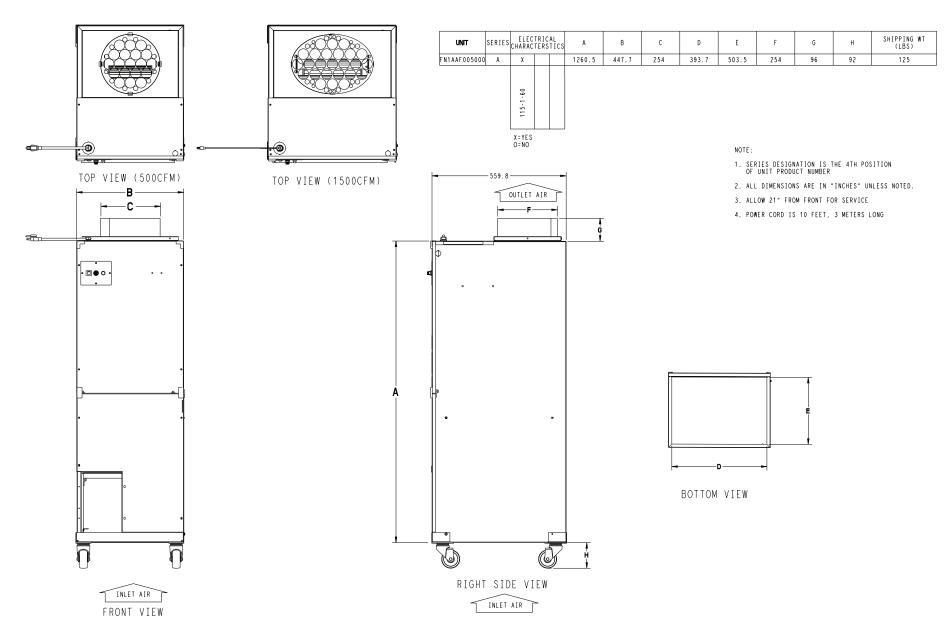
### NOT

- 1. SERIES DESIGNATION IS THE 4TH POSITION OF UNIT PRODUCT NUMBER
- 2. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.
- 3. ALLOW 21" FROM FRONT FOR SERVICE
- 4. POWER CORD IS 10 FEET, 3 METERS LONG

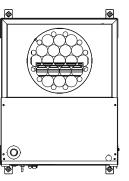


BOTTOM VIEW

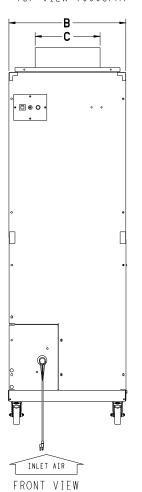
### **FN1AAF 005 Size Detailed Dimensions - Metric**

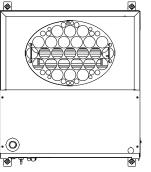


# FN1AAF 006/015 Size Detailed Dimensions - English





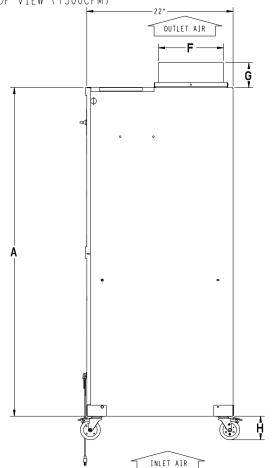




UNIT	SERIES	ELECTRICAL CHARACTERSTICS		A	В	С	D	E	F	G	Н	SHIPPING WT (LBS)	
FN1AAF006000	A,B,C	χ			49 5/8"	17 5/8"	10"	15 1/2"	19 13/16"	10"	3 3/4"	3 5/8"	125
FN1AAF015000	A,C	Х			53 7/16"	21 1/8"	13 3/8"	19"	19 13/16"	10"	3 3/4"	3 5/8"	150

X=YES O=NO

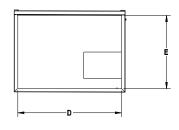
TOP VIEW (1500CFM)



RIGHT SIDE VIEW

### NOTE:

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- 2. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.
- 3. ALLOW 21" FROM FRONT FOR SERVICE
- 4. POWER CORD IS 10 FEET, 3 METERS LONG



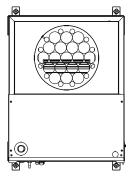
BOTTOM VIEW

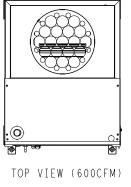
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INLET AIR

FRONT VIEW

### FN1AAF 006/015 Size Detailed Dimensions - Metric





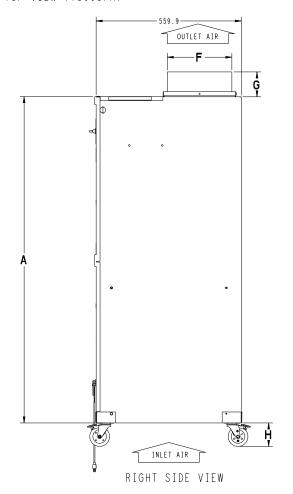
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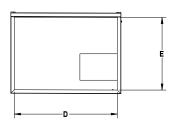
TOP	VIFW	(1500CFM)

UNIT	SERIES	ELECTRICAL CHARACTERSTICS			A	В	С	D	E	F	G	Н	SHIPPING WT (LBS)
N1AAF006000	A,B,C	Х			1260.5	447.7	254	393.7	503.5	254	96	92	125
N1AAF015000	A,C	Х			1357.3	536.5	340	482.7	503.5	254	96	92	150

X=YES O=NO

- 1. SERIES DESIGNATION IS THE 4TH POSITION OF UNIT PRODUCT NUMBER
- 2. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.
- 3. ALLOW 21" FROM FRONT FOR SERVICE
- 4. POWER CORD IS 10 FEET, 3 METERS LONG





BOTTOM VIEW

### Table 6 - Accessories

Description	P/N	Used On Models
Diffuser for Air Scrubber - Small	KFADG0101SML	005, 006
Diffuser for Air Scrubber - Large	KFADG0101LRG	015

Edition Date: 11/20