Clean Rooms International
Designing Flexible Solutions

Ultra Low Power Consumption

SAM Microwatt Fan Filter Units include a 99.99% efficient HEPA filter, 30% ASHRAE pleated type prefilter, seismic clip suspension points, safety switch which disables the unit while servicing, and solid state variable speed control with RFI suppression, allowing the airflow to be fine tuned.
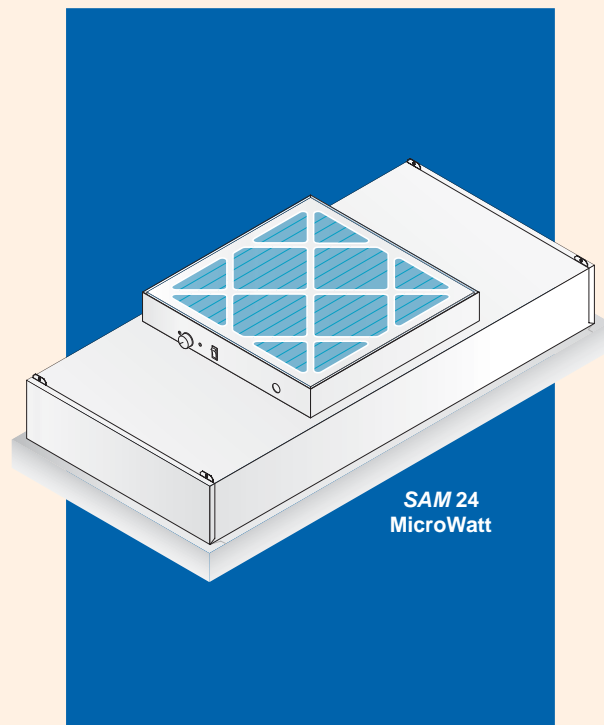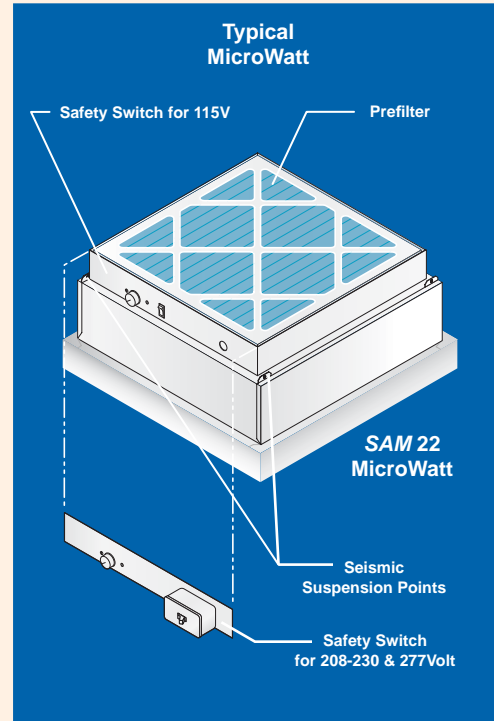
Housings are fabricated from steel with a white powdercoat finish and include seismic clip suspension points.

The energy efficient 280 motor blower is a low watt backward curved impeller, single phase, permanent split capacitor type motor blower assembly with thermal overload protection. Units are available in 115 Volt (60 Hz), 208-230 Volt (50/60 Hz) and 277 Volt (60 Hz).
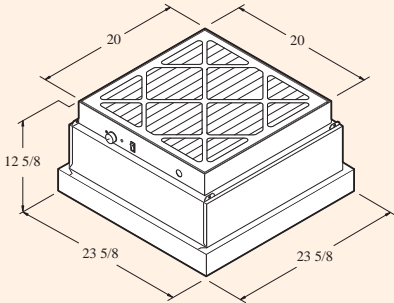
Final filters are protected with a white epoxy diamond pattern grille and are tested according to accepted procedures as described by the Institute of Environmental Sciences (IEST) and/or ISO standards. The standard HEPA filter is 99.99% eff. and an ULPA grade 99.9995% eff. filter is available as an option.

Popular options include an 8' power cord (110 Volt only), 99.9995% eff. ULPA grade final filter, UL 900 Class 1 filters and duct collar adapters. Refer to the back of this section for more options and accessories.

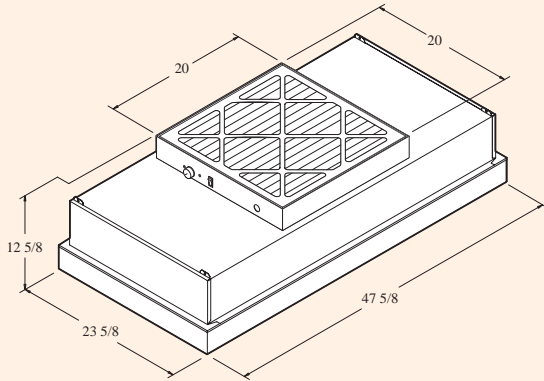For horizontal flow applications consult with one of our cleanroom experts in your area, or call the factory for more information.

Typical MicroWatt

Safety Switch for 115V — Prefilter

SAM 22 MicroWatt

Seismic Suspension Points

Safety Switch for 208-230 & 277Volt

SAM 24 MicroWatt

c(UL)us LISTED
AIR FILTERING APPLIANCE
4FA0

SAM is a registered trademark owned by Clean Rooms International

SAM 22 MicroWatt

cULus LISTED
AIR FILTERING APPLIANCE
4FA0

SAM 24 Microwatt

NCR Style Filter Data: The HEPA Filters are designed for 90 FPM average face velocity @ initial 0.47 w.g. and have a rated efficiency of 99.99% @ 0.3 micron or larger. An anodized aluminum frame holds the 53mm media which is protected by a diamond pattern white epoxy coated steel grille.

Final filters can be replaced by removing unit from ceiling, placing on a bench, removing and replacing the filter and re-installing unit in ceiling.
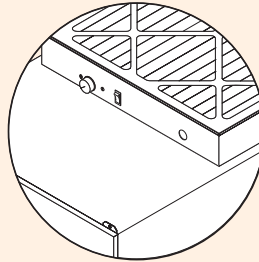
Low Profile: All *SAM* MicroWatt NCR Style Models are 12-5/8" high.

Standard Ceiling Size: All 2' x 4' models are designed to fit a nominal 2' x 4' ceiling grid with a 22.5" x 46.5" standard opening.
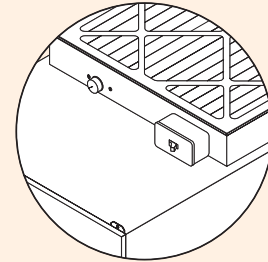
Air Flow: Airflow ranges from 400 to 650 CFM for a 2 x 4 unit and 250 to 350 CFM for a 2 x 2 unit. At 90 FPM, CFM is nominal 632 on a 2 x 4 and 300 on a 2 x 2 unit respectively. Airflow for units running at 50 Hz will be about 20% less.

Standard Equipment: Includes a 280 Low Watt motor, a prefilter and a solid state variable speed control with RFI Suppression. A safety switch is provided for all voltages as listed below.

Popular Options: Refer to next page for a list of popular options.

Safety Switch Detail
115V

Safety Switch Detail
208-230/277V

Motor Data					
Motor	**Voltage**	**Hz**	**Watts**	**Running Amps**	**Start-Up Amps**
280	115	60	115	1.0 [3]	1.5
280	208-230	50/60	115	0.6-0.5 [1]	1.5 [2]
280	277	60	105	.4	1.5
(1) Running amps will be less on 50Hz					
(2) Line voltage can affect actual start-up amperage					
(3) Field tests show 115V units running at 1.0 amps or less					

Replacement Filters	
Mfg. Code	**Description**
302070	2 x 2 NCR Style HEPA Filter, 99.99% eff. @ 0.3 micron
302071	2 x 2 NCR Style ULPA Filter, 99.9995% eff. @ 0.12 micron
302013	2 x 3 NCR Style HEPA Filter, 99.99% eff. @ 0.3 micron
302015	2 x 3 NCR Style ULPA Filter, 99.9995% eff. @ 0.12 micron
302090	2 x 4 NCR Style HEPA Filter, 99.99% eff. @ 0.3 micron
302100	2 x 4 NCR Style ULPA Filter, 99.9995% eff. @ 0.12 micron
302190	Prefilter 20" x 20" x 1", 30% ASHRAE efficient, pleated type

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Feb/2009

	Base Model (Ordering Information)							
Mfg. Code	**Model or Description**	**Style**	**Size**	**Voltage**	**Motor**	**Variable Speed Control**	**HEPA Filter**	**Weight**
12103*	*SAM* 22 MW	NCR	2 x 2	115	280	703084	302070	53 lbs. (24.0 kg.)
12250*	*SAM* 24 MW	NCR	2 x 4	115	280	703084	302090	65 lbs. (29.5 kg.)
12251	*SAM* 24 MW	NCR	2 x 4	208-230	280	703912	302090	65 lbs. (29.5 kg.)
12252	*SAM* 24 MW	NCR	2 x 4	277	280	703915	302090	65 lbs. (29.5 kg.)

* UL Listed
   Prefilter and Safety Switch are Standard on all Models

Popular Options: (Please choose from the following part numbers when ordering options)

Final Filters:
☐ 302071 2 x 2 NCR ULPA Filter 99.9995% eff.
☐ 302015 2 x 3 NCR ULPA Filter 99.9995% eff.
☐ 302100 2 x 4 NCR ULPA Filter 99.9995% eff.
☐ 308001 2 x 2 NCR HEPA UL 900 Class 1
☐ 308002 2 x 4 NCR HEPA UL 900 Class 1
☐ 308005 2 x 4 NCR ULPA UL 900 Class 1
☐ 308007 2 x 2 NCR ULPA UL 900 Class 1
☐ 302072 2 x 2 NCR HEPA with Centerboard and Test Port
☐ 302094 2 x 4 NCR HEPA with Centerboard and Test Port

Prefilters:
☐ 309802 Super Clean Prefilter Suitable for Class 1-100

Duct Collar Adapters:
☐ 19950 10" Duct Collar Adapter
☐ 19951 12" Duct Collar Adapter
☐ 19952 Side Load with 10" Duct Collar
☐ 19953 Side Load with 12" Duct Collar
☐ 19955 10" Top Load Duct Collar Adapter
☐ 19956 12" Top Load Duct Collar Adapter

Air Conditioning Mixing Box:
☐ 19958 Slanted Top with 10" Duct Collar
☐ 19959 Slanted Top with 12" Duct Collar
☐ 19947 Square with (2) 10" Duct Collars
☐ 19948 Square with (2) 12" Duct Collars

Roomside Variable Speed Control: (Includes Special Order Filters and Speed Control Parts)
☐ 19930 NCR Style 110-120 Volt
☐ 19931 NCR Style 208-230 Volt
☐ 19947 NCR Style 277 Volt

Pilot Light: (Includes Special Order Filters and Speed Control Parts)
☐ 19700 NCR Style Red Pilot Light 110-120 Volt Only (Light Indicates Power to Motor Only)
☐ 19701 NCR Style Red Pilot Light w/Pressure Switch 110-120 Volt Only (Light Indicates Power to Motor Only)

Radial Diffuser Grille:
☐ 19300 2 Diffuser Grille
☐ 19301 2 x 4 Radial Diffuser Grille

Miscellaneous:
☐ 703902 8' Power Cord 110-120V Only
☐ 603322 Gasket on Downstream Edge of Unit
☐ Magnehelic Gage: Refer to the Back of this Section
Comments:
_____
_____
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NOTE: Duct collar adapters, air conditioning boxes, pilot lights and adding other electrical components negates UL listing.

For more information and illustrations please refer to the back of this section

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