

**1/5 HP
3-Speed Fan Powered
Filter Module
Low Sound, Economical**

SAM MS 3-S Fan Filter Units provide quiet performance and economy while delivering 90 FPM airflow velocities, perfect for most cleanroom applications. Base design includes a 99.99% efficient HEPA filter, a prefilter and a 3-speed switch with an off position which disables the unit while servicing.

Housings are fabricated from steel with a white powdercoat finish and include seismic clip suspension points.

The 1/5 HP motor blower is a forward curved direct drive motor/blower assembly with isolation mounts. Units are available in 115 Volt (60 Hz) and 277 Volt (60 Hz).

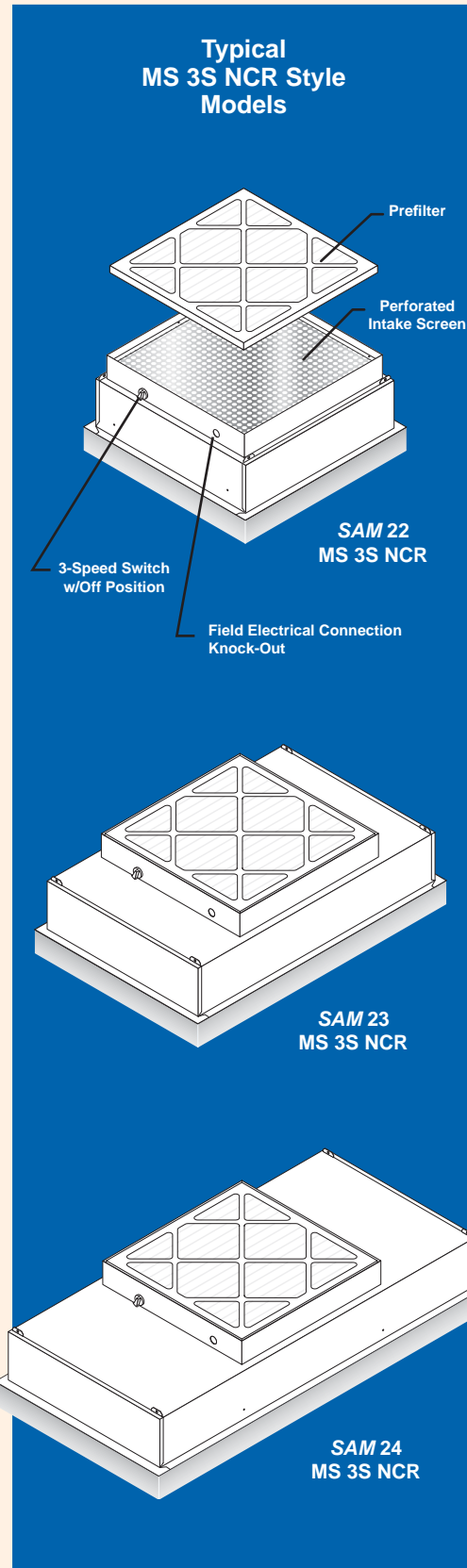
Final filters are protected with a white epoxy diamond pattern grille and are tested according to accepted procedures as described by the Institute of Environmental Sciences (IEST) and/or ISO standards. The standard HEPA filter is 99.99% eff. and an ULPA grade 99.9995% eff. filter is available as an option.

Optional perforated stainless steel or aluminum grilles are available.

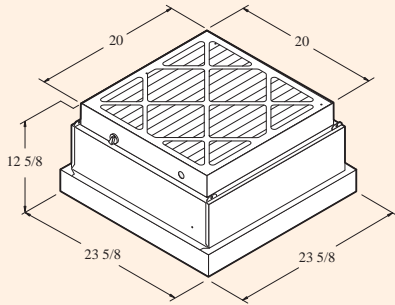
Other popular options include an 8' power cord (115 Volt only). Refer to the back of this section for more options and accessories.



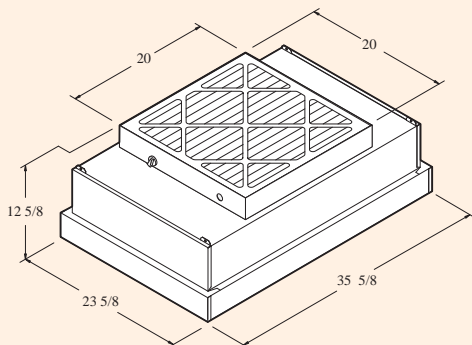
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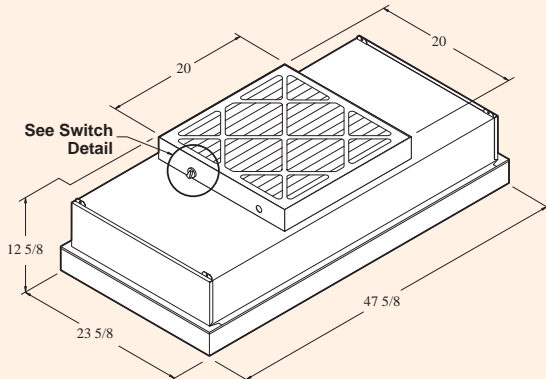
Specifications for SAM[®] MS 3S NCR Units



SAM 22 MS 3S NCR



SAM 23 MS 3S NCR



SAM 24 MS 3S NCR

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 MicroSound NCR Style Models are 12-5/8" high.

Air Flow: Airflow ranges from 500 to 750 CFM for a 2 x 4 unit and 250 to 400 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.

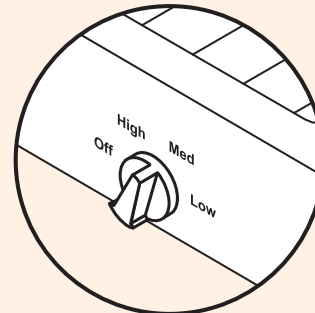
General Information:

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.

Sound Level: At average face velocity of 90 FPM measured 30" from face of filter, sound level is approximately 50-52 dba with less than 45 dba ambient sound level. Field conditions, voltage and method of testing could produce different results.

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

Switch Detail
115V/277V



Motor Data								
Motor	Voltage	Hz	Amps			Start-Up Amps ^(1, 2)		
			Low	Med	High	Low	Med	High
1/5 HP	115	60	1.45	1.95	2.85	1.70	2.60	5.0
1/5 HP	277	60	.52	.71	1.1	.60	.85	1.5
(1) Line voltage can affect actual start-up amperage								
(2) Use standard NEC tables for sizing circuits								

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 eff., pleated type

Base Model (Ordering Information)							
Mfg. Code	Model or Description	Style	Size	Voltage	Motor	HEPA Filter	Weight
12339	SAM 22 MS 3S NCR*	NCR	2 x 2	115	1/5 HP	302070	58 lbs. (26.3 kg.)
12340	SAM 22 MS 3S NCR*	NCR	2 x 2	277	1/5 HP	302070	58 lbs. (26.3 kg.)
12343	SAM 23 MS 3S NCR*	NCR	2 x 3	115	1/5 HP	302013	62 lbs. (28.1 kg.)
12344	SAM 23 MS 3S NCR*	NCR	2 x 3	277	1/5 HP	302013	62 lbs. (28.1 kg.)
12347	SAM 24 MS 3S NCR*	NCR	2 x 4	115	1/5 HP	302090	65 lbs. (29.5 kg.)
12348	SAM 24 MS 3S NCR*	NCR	2 x 4	277	1/5 HP	302090	65 lbs. (29.5 kg.)

* UL Listed
3 Speed Switch Standard on all Models

Popular Options: (Consult with factory for other possible options)

Speed Control:

- SAMLink Remote Speed Control System
- Solid State Variable Speed Controller, 120v only

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
- 308002 2 x 4 NCR HEPA
- 308005 2 x 4 NCR ULPA
- 308007 2 x 2 NCR ULPA
- 302072 2 x 2 NCR HEPA with Centerboard and Test Port
- 302094 2 x 4 NCR HEPA with Centerboard and Test Port

Prefilters:

- 302197 Extended Life Prefilter 20" x 20" x 2"

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

Pilot Light:

- 19700 NCR Style Red Pilot Light - (w/36" lead for grid or ceiling mount) Light Indicates Power to Motor
- 19701 NCR Style Red Pilot Light w/Pressure Switch - (w/36" lead for grid or ceiling mount) Light Indicates Power to Motor and Air Flow

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

Radial Diffuser Grille:

- 19300 2 x 2 Radial 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
- Static Control: Refer to the Back of this Section

Comments:

NOTE: Duct collar adapters #19950 & #19951 may be used without negating the UL listing. All other duct collars, 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