

Quality Air Pays Its Way!



APS-400

AIR PURIFICATION SYSTEM

- MULTI-STAGE AIR FILTRATION
- OUTDOOR AIR ENERGY LOAD REDUCTION
- LOW NOISE
- INDOOR AIR QUALITY IMPROVEMENT
- COMPACT UNIT DESIGN



INTRODUCTION

There are many applications that require both compact, low cost considerations with high efficiency air filtration. Circul-Aire's APS-400 (Air Purification System) is designed to effectively remove particulate and gaseous contaminants from confined spaces, while reducing the amount of outside air that would normally be required for dilution of contaminants.

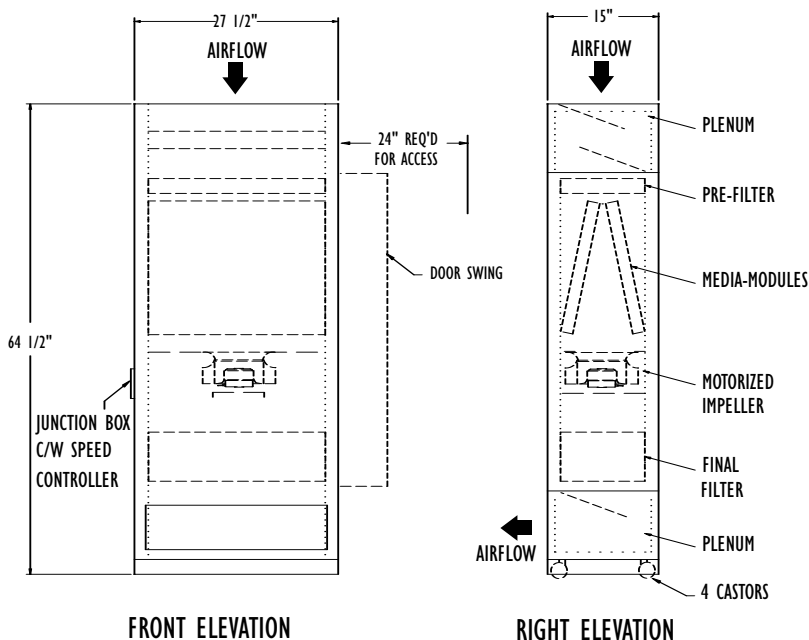
When considering an alternative to outdoor air dilution within a given space, the Circul-Aire APS-400 is used to reduce contaminant concentrations within a space while minimizing the requirement for costly outdoor air that is often contaminated from the onset. The APS-400 can be used to eliminate internally generated contaminants through its multi-stage filtration system, and recirculate the required maximum amount of room air. The result is clean, healthy, breathable air that has been filtered of contaminants, both internally generated and existing in the outside air.

The Circul-Aire APS-400 system is designed to meet the most stringent requirements of the latest building ventilation standards and codes on indoor air quality. This series of APS units feature multi-stage filtration, incorporating high efficiency chemical and particulate filtration, and are designed with ultra-high capacity providing longer filter operating life. The APS filter sections conform to all ASHRAE standard considerations and consist of:

- 30% Pre-filter (288 sq. in. face area);
- MULTI-MIX® chemical media bank incorporating up to 37.5 lb. of MM-1000 (other media formulations available);
- 95% DOP Final HEPA 0.3 micron filter (288 sq. in. face area).

Circul-Aire engineers have designed the APS-400 for low cost considerations in classrooms, hospitals, labs, penal institutions, restaurants, smoking lounges, conference rooms, etc.

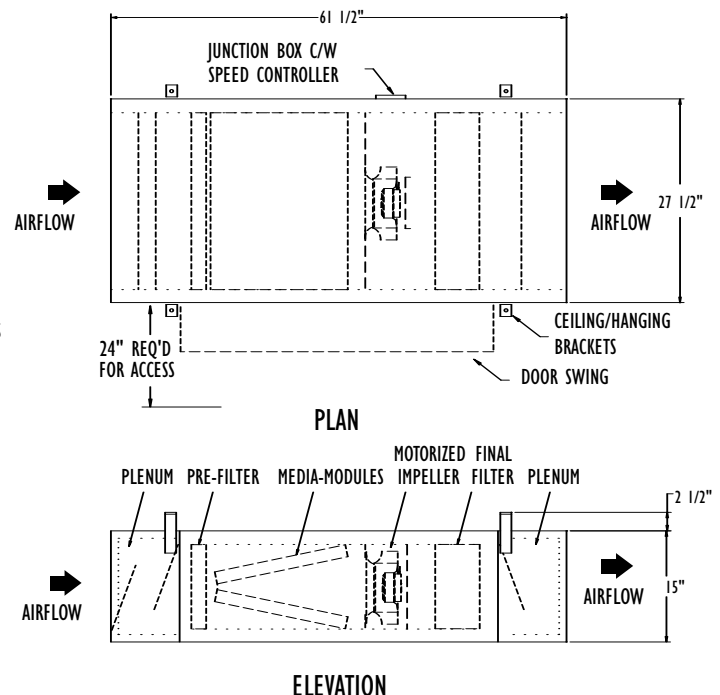
The Circul-Aire APS-400 will provide a single source solution to current indoor air quality problems.



FRONT ELEVATION

RIGHT ELEVATION

VERTICAL MODEL



PLAN

ELEVATION

HORIZONTAL MODEL

■ GENERAL SPECIFICATIONS

The APS-400 is a compact, self-contained air purification and recirculation unit combining gas phase and particulate filtration. The APS-400 offers maximum odor and particulate removal at high efficiency. All selected particulate filters and chemical media are shipped in the unit for convenience. The unit on full speed does not exceed a sound pressure level of 54 dBA at a 5-foot distance. The unit is complete with a 5-foot plug, castors, and a disconnect switch or optional speed controller.

■ HOUSING AND MATERIAL FINISH

Walls are 1.5" thick double panels made of 22-gauge zinc coated steel primed with a high sheen light grey paint. The paint is a two-part polyurethane with high abrasion chemical and solvent resistance. Housing is acoustically and thermally insulated with 2 lb./cu. ft. fiberglass insulation within the double walls. All seams are caulked to maintain leakage lower than 0.9% to the ambient under operating conditions. The door has a positive pressure latch to provide an airtight seal on the pvc closed cell door frame gasket.

■ COMPONENTS IN DIRECTION OF AIRFLOW

1.0 Intake Plenum

Section is acoustically insulated, complete with a non-allergenic and inert polyester foam. Optional intake grille or duct connections.

2.0 Particulate Pre-Filter

Pre-filter for larger particulates; 30% efficiency, based on ASHRAE Standard 52. Standard filter size (12" x 24" x 2") in a multi-pleat configuration is a non-woven synthetic media.

3.0 MULTI-MIX® Media Bank

Application-specific granular media is available in refillable trays. Capacity: 0.75 cu. ft. Chemical media residence time is approximately 0.10 sec. at 450 CFM.

4.0 Fan Section

The blower operates on 120/01/60 voltage and provides 200-500 CFM of purified air. The blower is a high efficiency motorized impeller mounted on vibration isolators. The backward curved airfoil impeller is nonoverloading, corrosion resistant, and provides

very stable performance. The 240 watt (1,000-2,840 RPM) external rotor motor has a full load amp rating (FLA) of 2.0 amps. The motor is complete with permanently lubricated ball bearings and thermal overload with automatic reset.

5.0 High Efficiency Final Filter

Optional 95% ASHRAE rated filter or HEPA 95% DOP for sub-micron particles. Standard filter size (12" x 24" x 6") in a multi-pleat configuration is composed of ultra-fine glass fiber media. High efficiency filters are gasketed to prevent air bypass.

6.0 Discharge Plenum

Section is acoustically insulated, complete with a non-allergenic and inert polyester foam. Optional discharge double deflection grille or duct connections are available.

CHARACTERISTICS

MODEL	APS-400-V VERTICAL	APS-400-H HORIZONTAL
DIMENSIONS: INCHES	L X W X H - 64 1/2" X 27 1/2" X 15"	L X W X H - 61 1/2" X 27 1/2" X 15"
MM	L X W X H - 1,638 MM X 699 MM X 381 MM	L X W X H - 1,562 MM X 699 MM X 381 MM
APPROXIMATE WEIGHT:	160 LB. (72.5 KG)	150 LB. (68 KG)
APPROXIMATE OPERATING WEIGHT:	225 LB. (102 KG)	215 LB. (97.5 KG)
AIRFLOW CAPACITY:	200-500 CFM (340-850 CU. M/HR.)	
MOTOR:	EXTERNAL ROTOR MOTOR, 240 WATTS (1,000-2,840 RPM) 120 VOLTS, 1 PHASE, 60 HERTZ, F.L.A.: 2.0 AMPS	
APPROXIMATE NOISE LEVEL: (AT A DISTANCE OF 5 FT.)	54 dBA	

APS-400 AIR PURIFICATION SYSTEM

■ FEATURES

- Satin coat housing
- Insulated double-wall panel construction
- Corrosion resistant polyurethane paint
- 30% efficiency pre-filter for larger particulates
- One MULTI-MIX® media stage for odor and gas control (0.75 cu. ft. capacity)
- 95% ASHRAE or 95% HEPA final filter
- Motorized impeller
- Quick release latch with positive seal
- One full service access door with piano hinge located on the right side of the unit
- Castors (vertical unit) or suspension brackets (horizontal unit)
- 5-foot plug (120/01/60) on vertical units
- Disconnect switch
- Double deflection grille(s) and/or ducted connections* on intake and discharge openings

■ OPTIONS

- Variable speed controller, unit mounted or remote**
- Minihelic pressure differential gauge for monitoring system pressure
- Hot water heating coil
- DX or chilled water cooling coil

Note:

* Castors are not provided when duct connections are installed.

** No disconnect switch is provided when the optional variable speed controller is mounted on the unit.

APPLICATIONS

SECTORS	APPLICATIONS	AREAS
HEALTH	Contaminant Control	<ul style="list-style-type: none"> • Airports and terminals • Operating & autopsy rooms • Medical research centers • Laboratories • Daycare centers • Cafeterias • Smoking rooms • Senior citizens homes
EDUCATIONAL	Air Quality Control	<ul style="list-style-type: none"> • Classrooms • Locker rooms • Sport facilities • Cafeterias
MUSEUMS & ART GALLERIES	Preservation of Artifacts	<ul style="list-style-type: none"> • Exhibition halls • Archives • Libraries • Restricted storage areas • Public museums & art galleries

■ MULTI-MIX® MEDIA & TECH-CHEK™ SERVICE

Circul-Aire's MULTI-MIX® is a proven filter media, which provides continuous purification of corrosive, odorous, and toxic contaminants in industrial and commercial environments. MULTI-MIX® media combines the adsorption properties of activated carbon with the oxidation properties of chemically impregnated alumina and carbons. In addition, several MULTI-MIX® media are UL Class 1 (nonflammable).

Various high-efficiency MULTI-MIX® formulas enable Circul-Aire to provide the most fitting combination of physical and chemical characteristics to meet the specific needs of each application.

Media analysis through Circul-Aire's TECH-CHEK™ Program ensures maximum efficiency of its products. A complete computerized report establishes a media replacement schedule for each unit. Circul-Aire's ISO-Certified laboratory can also provide additional performance tests against specific air contaminants.

Refer to Circul-Aire brochures for more information on its MULTI-MIX® media and TECH-CHEK™ Service.



Circul-Aire Inc. is a subsidiary of Dectron Internationale

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