

Halton Recirculating extract unit for commercial foodservice industry



Unlock new locations



Environmental benefits



Problem solving



Cost saving & flexibility



Enabling Wellbeing

Form#: BR-018
Reco-Air by Halton Recirculating Units
Rev: 10-2024



Halton

No requirement for ductwork to exterior.

RAH units work at the heart of a kitchen ventilation system serving all **electric catering equipment** and achieving complete recirculation of exhaust air with no requirement for route to outside.

Highly efficient filter technology removes particulates and odors and provides exhaust air independently certified as clean to re-introduce as supply air.

Simplify planning procedures and providing opportunities to install kitchen operations in previously unfeasible locations.

Reco-Air units prepares the exhaust air to be recirculated by removing grease, smoke and odor.



Grease



Smoke



Odor

✓ Cost effective

- RAH units reduce CAPEX investment. They eliminate the costly fire-rated duct work to atmosphere thus reducing the construction costs. They also reduce installation costs as well as utility usage with a compact design and an ease of assembly.
- When combined with the required Halton CJ hoods the increased hood efficiency can result in potentially a smaller RecoAir unit.
- RAH units are a cost efficient alternative to traditional extract when there's no easy route to atmosphere.

✓ Emissions control

- The contaminants produced by catering kitchens and food preparation facilities are not any longer expelled to atmosphere contrary to traditional extract.

✓ Flexible locations

- RAH units can be located internally adjacent to or remote from the point of hood extraction. The unit be floor standing or can be hung horizontally within ceiling voids giving flexibility to equipment layout and also eliminating the requirement for certain planning processes.
- RAH units are easily retro-fitted or relocated.

✓ Approvals

- RecoAir units have been tested as a Component to applicable sections of UL 710B, including filtration and emissions requirements. RecoAir units are recognized as a Hood and Duct Accessory under UL 710.
- CE Certification



Remove cooking effluent safely and save installation costs over ducted systems.



Ventless hood systems recirculate the heat generated by the cooking appliances back into the space. Consequently, it is essential to ensure that the HVAC design includes sufficient cooling capacity (tonnage) to handle this added heat gain.

Space Design Considerations

Space ventilation (minimum supply of fresh air) shall comply with local regulations based on cooking equipment installed. Space shall have adequate ventilation with minimum exhaust airflow 10% of RAH design airflow.

RAH is a recirculating system with heat from cooking equipment released back to space. Additional space cooling will be required.

Recommended Additional Cooling Tons

Consult with your Mechanical Engineer or your Halton Representative on the most effective way to address this additional load.

Cooling capacity required (sensible heat only). Halton offers support with load calculations on a site-by-site basis.

	Tons
RAH.1.0	2
RAH 1.5	2.6
RAH 2.0	3.9

Save on installation and operation with the Capture Jet™ technology

The Capture Jet™ technology, used on Halton's hoods, enables reducing the exhaust airflow rates by up to 40% and even 50% with low proximity hoods.

Can you afford not to reduce the size of Reco-Air unit accordingly? What to say about the reduction of the ducts section, the installation time, the noise of operation and drafts, the energy consumption for the fans and also the space-saving in the plant room and in the ceiling voids? It is really question of a perfect match between savings and comfort.





Increased operation savings thanks to longer lifetime for the filters

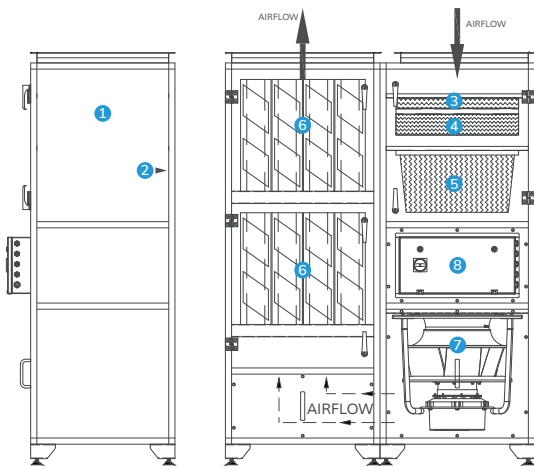
The Capture Jet™ hoods are equipped with high efficiency KSA cyclonic filters. They remove up to 95% of the 10 microns particles. The combination with mesh filters globally increases KSA filters' efficiency.

What is captured by the easy to clean primary filters does not have any longer to be captured by Reco-Air unit's filters. Their lifetimes are increased leading to savings on operation.



Limited heat transfer, minimum leakage and built to be fire stable

Reco-Air unit's structure is made of welded steel double wall panels are insulated with .20lb/in³ density mineral wool. This not only makes the unit, in the unlikely event of fire, stable but also limits the heat and odor transfer to the plant room on normal operation. It also mitigates sound from the unit.



CODE DESCRIPTION

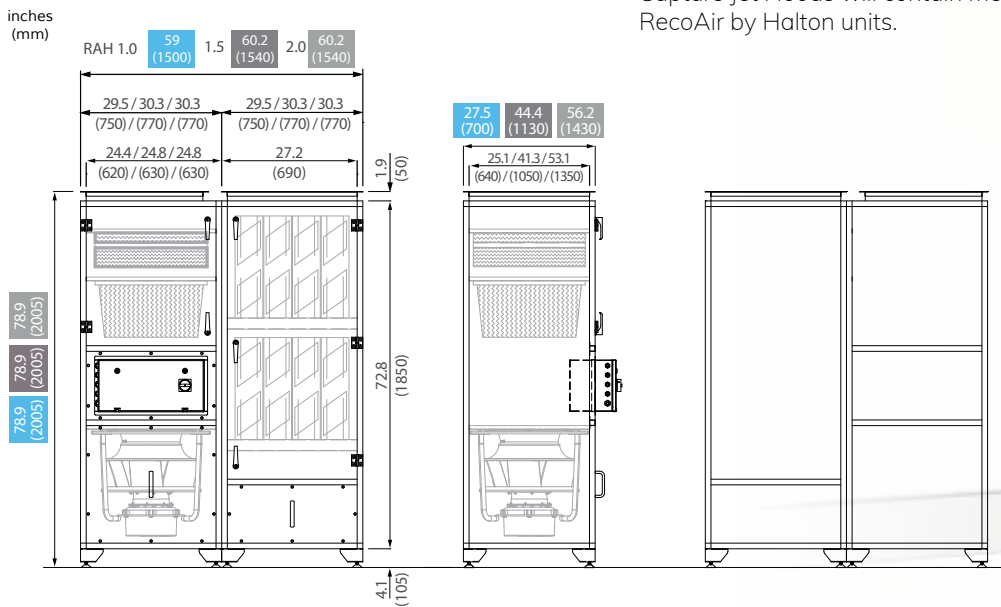
- 1 1" double skin panel, .20 lb/cubic inch density mineral wool insulation
- 2 Galvanized steel finish to interior
- 3 Large grease particle removal MERV 8
- 4 Fine grease particle removal MERV 11
- 5 Smoke removal MERV 16
- 6 Coconut Shell Activated Carbon Cylinders - Odor removal minimum dwell time shall be 0.2 seconds.
- 7 EC Plug Fan, 208/460/3/60hz, suitable for 0-10v signal control
- 8 Control Box (ANSUL and Control Box can also be mounted on the exterior of the unit)

Note: Outdoor air rates for general ventilation must comply with IMC, ASHRAE 62.1, and local codes, and be at least 10% of total system capacity, as recommended by the manufacturer.

Note: When used with an electric broiler, the following changes to the filter arrangement are made:

- Replace the V-Bank MERV 16 final filter with a 99.97% HEPA filter
 - Adjust static pressure for HEPA
- * Capture Jet Hoods will contain mesh secondary filters when paired with RecoAir by Halton units.

RecoAir Units Standard Specification



- Powder coat, baked enamel finish
- Airflow Up to 3800 cfm @ 1.3" s.p.
- Max. working temperature 140°F (60°C)

	Unit Dimensions Dnd Weight																			
	CFM	Min. Outdoor Air CFM	Static Pressure	Fan Size (in)	Amps	Max Hood Length* (in)	Floor Mounted Size						Horizontal Mounted Size							
							W		D		H		Weight (lbs)	W		L		H		Weight (lbs)
							in	mm	in	mm	in	mm		in	mm	in	mm	in	mm	
RAH.1.0	1900	190	1.0"	17	8	112"	59	1500	29	737	78.9	2005	1197	27.5	700	141	3581	34.5	876	1360
RAH 1.5	2550	255	1.3"	17	8	153"	60.2	1540	44.5	1130	78.9	2005	1662	44.4	1130	141	3581	36.25	921	1892
RAH 2.0	3800	380	1.3"	17	8	228"	60.2	1540	56.2	1429	78.9	2005	1980	56.2	1430	141	3581	36.25	921	2251

(*) Max hood length typically connected to the unit

Acoustic survey report by Applied Acoustic Design

RAH noise levels are very low. Casing-radiated noise from standard units are between 53 to 64 dBA when measured at 1m.



ABOUT US

Halton Group is the global technology leader in indoor air solutions for demanding spaces. The company develops and provides solutions for commercial and public premises, healthcare institutions and laboratories, professional kitchens and restaurants as well as energy production environments and marine vessels. Halton's mission is to provide its end-users with safe, comfortable, and productive indoor environments that are energy-efficient and comply with sustainable principles.

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