



Internal Recirculating kitchen extract units for the foodservice industry



Reco-Air Your Commercial Advantage

Reco-Air is the fully approved, industry accredited alternative to high level externally ducted kitchen extract. Needing no route to atmosphere or external duct, Reco-Air units simplify design and planning, significantly reduce fire risk, provide internal layout flexibility and ensure no nuisance emissions. Enabling commercial kitchens to be installed in previously unfeasible locations and operators take full advantage new opportunities.

Reco-Air units are used with all electric cooklines and remove moisture, smoke, grease and suppress odour from extract cooking air returning clean air, independently certified as safe to return to an occupied environment. A range of Reco models and various build configurations to suit all kitchen sizes and layouts and these can be designed into new projects or retrofitted to expand existing cooklines or to resolve problem sites.

Reco-Air smart controls are user friendly but reassuringly advanced with integrated safety protocols and ensure energy efficient operation by automatically adjusting fan speed to operate only at the required duty. Ongoing maintenance is carefully monitored with filters only being changed as they reach end of life. Ensuring the most cost-efficient solution for operators and a fully compliant and maintained system to reassure landlords and authorities.

The Reco-Air team expertly review catering equipment schedule, kitchen layout and operator's requirements to calculate the most suitable Reco-Air model and present the very best solution for each project.

Overview

Reco-Air manufacture & supply:

Internal Recirculating Extract Units for Commercial Kitchens

Patented Technology cleans extract canopy air, removing:

Moisture Smoke Grease & Suppressing Odour

Recirculating clean air back to the Canopy or internal area:

No requirement for external duct or route to atmosphere

Internal Recirculating Kitchen Extract has many benefits:

Reduced Fire Risk, Unlock New Locations, Expand Menu Offers, Layout Flexibility



Advantages

- No ductwork to atmosphere or through adjoining Fire Zones / Floors
- No make-up air requirement
- Potential to reduce electrical supply capacity
- Automatic adjustment of Fan speed to maintain design air flow rate
- Simple access for future maintenance
- No specialist duct cleaning or auditing
- Choice of Reco-Air models to suit cookline duty
- Build Configuration Options - Floor standing, Horizontal for Ceiling Voids, Double Stack, External Weatherproofing
- Flat Pack delivery option for restricted delivery access
- Favourable capital cost analysis Vs conventional extract
- Enhanced environmental credentials and improved local environment
- 24/7 Remote monitoring of filter status to ensure cost effective servicing
- Global Service network of Reco-Air trained engineers to supply/install specification grade replacement filters and annual service visits.



Model	UL	Void (V)	DSI / DSE	Air flow	Pascals	Fan Size	Amps	Phase
RA 0.5 S		✓		0.5 m ³ /s (1,800 m ³ /hr)	250 Pa	310 mm Ø	4.0	Three
RA 0.8 S		✓		0.8 m ³ /s (2,880 m ³ /hr)	180 Pa	310 mm Ø	4.0	Three
RA 1.0 S	✓	✓	✓	0.9 m ³ /s (3,240 m ³ /hr)	250 Pa	355 mm Ø	7.2	Three
RA 1.5 S	✓	✓	✓	1.2 m ³ /s (4,320 m ³ /hr)	320 Pa	355 mm Ø	7.2	Three
RA 2.0 S	✓	✓	✓	1.8 m ³ /s (6,480 m ³ /hr)	250 Pa	450 mm Ø	8.0	Three
RA 2.5 S		✓	✓	2.25 m ³ /s (8,100 m ³ /hr)	320 Pa	2 x 450 mm Ø	16.0	Three
RA 3.0 S			✓	2.7 m ³ /s (9,720 m ³ /hr)	320 Pa	2 x 450 mm Ø	16.0	Three
RA 4.0 S			✓	3.6 m ³ /s (12,960 m ³ /hr)	250 Pa	2 x 450 mm Ø	16.0	Three

Notes:

1. All Standard Models (S) available as floor mounted.
2. All Standard Models available for internal or external application.
3. UL – Underwriter’s Laboratories compliant.
4. DSI - Double Stacked Internal.
5. DSE – Double stacked External.
6. Dimensions & weights for each configuration available on application.

Key Performance Indicators

Design Duty, SFP, Dwell Time & Noise Breakout Levels

MODEL	Design Air Volume m3/s	External Pressure Pa.	Specific Fan Power SFP (Clean Filters) kW/m3/s	Carbon Filter Dwell- Time sec.	Casing Breakout in dB(A) @ 1m Free-Field	
					Filters Clean	Filters Dirty
RA0.5	0.5	250	0.801	0.228	41	50
RA 0.8-PLUS	0.8	180	0.91	0.214	48	54
RA 1.0	0.9	250	1.48	0.203	57	64
RA 1.5	1.2	320	1.27	0.228	53	62
RA 2.0	1.8	250	1.27	0.203	53	60
RA 2.5	2.25	320	1.45	0.203	59	67
RA 3.0	2.7	320	1.36	0.203	58	67
RA 3.5	3.15	320	1.35	0.203	56	65
RA 4.0	3.6	250	1.27	0.203	56	63

Return Air Quality Report

2.5 Summary

The air quality from the Reco-Air system is very clean, and around ISO Class 5 when there is no load (i.e. no cooking smoke). When the system is under load from the cooking activities the air quality drops as the smaller particles penetrate the system. The air quality maintains a level of around ISO Class 7-8 for these smaller particles. The larger particles are arrested by the system during cooking periods and for these sizes ISO class 5-6 is seen.

When you consider that in atmospheric air you could expect $\geq 0.5 \mu\text{m}$ particles to be somewhere in the region of 3,000,000,000 per m^3 . ISO Class 8 represents around 10^3 cleaner than the atmospheric conditions. **This means that the air returning to the kitchen from the Reco-Air Unit is around a thousand times cleaner (for sub-micron particulates) than typical atmospheric conditions external to the premises.**

Site: **The Waterside (Pub & Restaurant)**
1227 The Boulevard
Imperial Wharf
Fulham
SW6 2SU

Area/Equipment: **Reco-Air Recirculating Kitchen Extract Air System**

Date(s) of Visit: **31 March – 15 April 2015** Report Issue Date: **21 April 2015**

Validair Reference: **VA-RBF-50169-Rev2** Client Order Reference: **MH/mh-FW**

Tests Performed By: **S Ward**

Validair

Accreditations & Approvals

Reco-Air units are DW172 & CE compliant, meet UK and EU safety requirements and are **UL710b** listed.

CE Compliant

DW172 Compliant (Section 25)



Underwriters Laboratory global accreditation confirming Reco-Air units meet strict NFPA fire safety regulations and approved for use with high-risk cooking in high-risk locations.

Range of UL710b Listed models available on request.



Accreditations & Approvals

- **Patented**
- **DW172 (2018)**
UK's strict guideline process for kitchen ventilation – Recirculation, (Section 25) to Reco-Air patented specification
- **TR19**
Complies to strict UK installation guidelines
- **City of Westminster (London) Approval**
Reco-Air specification is the approved recirculation/internal extract alternative to high level discharge. Reco-Air patented specification included in CoW Guidelines for Kitchen Extract Guidelines (Dec 16)
- **TFL – Transport for London**
Reco-Air approved for operating in Underground stations and subterranean ticket halls
- **Network Rail**
Reco-Air approved for Network Rail train stations
- **CE European Conformity**
Fully Compliant
- **UL710B Listed**
Globally recognised US accreditation (Underwriters Laboratories), certifying Reco-Air units to operate high risk cooking in high risk locations – Airports, travel hubs, railway stations, shopping malls. A range of UL Listed models are available on request.
- **NFPA Section 13**
Fire Safety Approved



Example Reco-Air Operators

