Coanda



Mobile Demonstration Filter Fume Cupboard

Probably the safest and quietest mobile filtration fume cupboard in the world



- Real time gas monitoring eliminates COSHH guess work with filter alerts
- Crystal clear rear visibility for 360-degree demonstrations
- Whisper quiet operation down to >35dBa
- Sliding sash, air bypass & emergency purge for operator protection
- Tamper proof secure service connections
- LCD touch screen smart controller, auto tracking face velocity, EC fan tracking with multiple air and gas sensing technology.



Full compliance with CLEAPSS Guide G9 - Leaders in containment technology

The **Coanda** - Ultimate safety, ultra clear visibility, easy to manoeuvre, super rigid, construction.







LCD touch screen smart auto-controller, face velocity and EC fan tracking with multiple air and gas sensing technology.

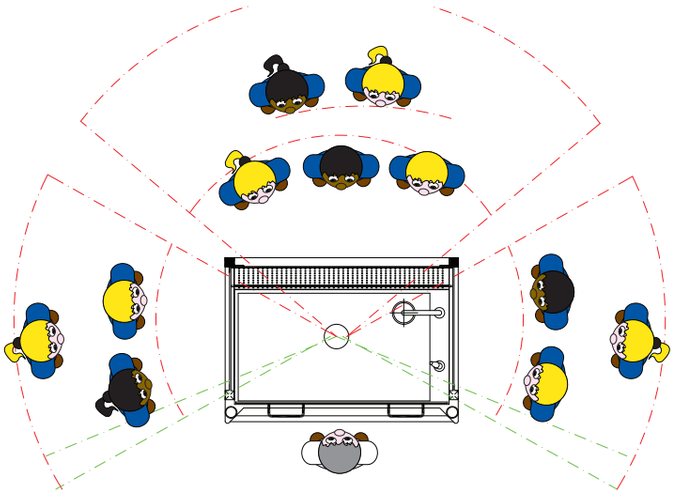


Unique tamper proof locking system for hoses and lab connections

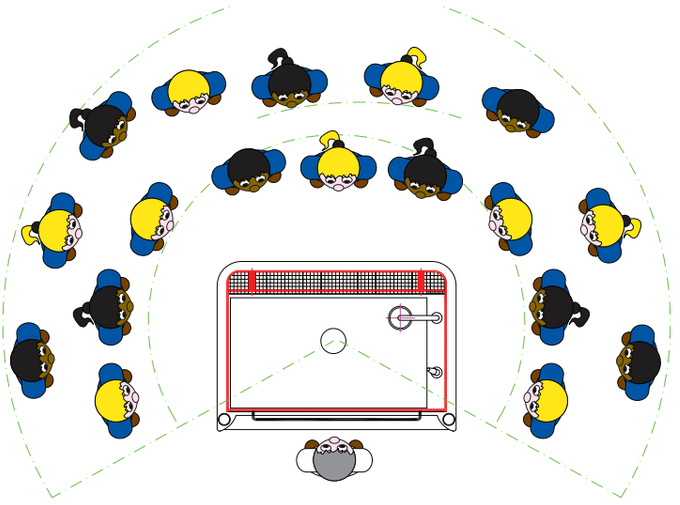


- Real time gas monitoring eliminates COSHH guess work with filter alerts
- Crystal clear rear visibility for demonstrations
- Whisper quiet operation down to >35dBa
- Sliding sash, air bypass & emergency purge for operator protection
- Zero fumes, supporting energy efficiency and reduced carbon footprint
- 70% energy saving over conventional fume cupboards

Example of viewing capabilites of the **Coanda**



Typical old-style Fume cupboard



Coanda showing maximum visibility



Corner-less design. Maximum clarity. Total visibility. Effortless to clean.

The **Coanda** - modern technology, modern features

- Crystal clear clarity, whisper operation - perfect for laboratory demonstrations and teaching environments
- Air-bypass to prevent deflection of bunsen flame when lowering sash.
- Curved front coanda air entry improving containment
- Curved rear for cleaning and decontaminating - no dirt build-up
- Curved air-slot sash handle with full D-Pull
- Touch screen LCD Smart control with auto tracking face velocity and gas sensing technology.
- 400mm sash stop as CLEAPSS G9
- Water and Gas - remote operation for operator safety, with raised outlets to resist corrosion from spillages
- RCD Double socket and consumer unit for safety
- Flush side handles for safe movement between laboratories
- Key locking, tamper proof storage for all utility hoses
- Fast-fix lab connection - messy utilities are a thing of the past







Edu-Carbon Filters

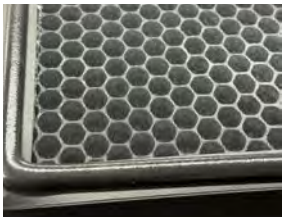
Introducing our **EDU-Carbon** triple layered filters specifically designed to comply with CLEAPSS G9.



Edu-Carbon Filters

Tri-layered impregnated, activated carbon filter. The following is a list of substances, which in the quantities usual in school experiments, can be released safely in a fume cupboard as advised in the G9 Fume Cupboards in Schools.





Safe - seal gasket



INORGANIC COMPOUNDS

ALUMINIUM CHLORIDE AND BROMIDE AMMONIA
AMMONIUM CHLORIDE FUMES
BROMINE
CHLORINE
CHROMIUM (VI) DICHLORIDE DIOXIDE (CHROMYL CHLORIDE)
HYDROGEN ACID VAPOUR
HYDROGEN SULPHIDE
IODINE
IODINE CHLORIDES
LEAD FUMES
LEAD BROMIDE FUMES
MERCURY AND ITS COMPOUNDS
NITRIC ACID VAPOUR
NITROGEN OXIDES (ACIDIC)
PHOSPHINE
PHOSPHORUS CHLORIDES & BROMIDES
PHOSPHORUS OXIDES
SILICON TETRACHLORIDE
SULPHUR CHLORIDE
SULPHUR DIOXIDE
THIONYL CHLORIDE
TIN (IV) CHLORIDE
TITANIUM TETRACHLORIDE
ZINC CHLORIDE FUMES

ORGANIC COMPOUNDS

ACID AMIDES
ACID ANHYDRIDES
ACID CHLORIDES
ACIDIC NITROGEN OXIDE
ALCOHOLS
ALDEHYDES
ALIPHATIC AMINES AND THEIR SALTS ALIPHATIC
HYDROCARBONS AROMATIC AMINES, HYDROCARBONS
AROMATIC NITRO COMPOUNDS
CARBOXYLIC ACIDS ESTERS
ETHERS
KETONES
NITRILES
ORGANO HALOGENS
PHENOLS
PYRIDINE

DUSTS etc

DYES
ENZYMES
SMOKE









CAUTION - NOTE THAT **HYDROGEN, CARBON MONOXIDE, NITROUS OXIDE** AND **METHANE** ARE SPECIFICALLY EXCLUDED FROM THE LISTS. THESE WILL **NOT** BE ADSORBED BY ANY FILTERS BECAUSE OF THEIR LOW MOLECULAR MASS

FlexiFast™ Universal Docking Station

The ultimate tamper-proof solution for secure and efficient mobile fume cupboard connections. **Bench and Wall mounted types**



FlexiFast™ Universal Locking Docking Station

Crystal-clear locking door with spare key

Universal quick-release system connects fume cupboards in seconds Compatible with all mobile fume cupboards for effortless docking

Durable powder-coated steel with concealed tamper-proof locking

Modular design for easy customisation to any lab layout Enhances lab productivity, safety, and security

Manufactured from 18swg zintec steel, smooth white RAL9016 finish Quick-release water and gas couplings (male & female)

13A switched socket outlet, fully earthed
Integrated restraining bracket and waste connection











Approved by CLEAPSS and SSERC for safety and compliance. Designed for seamless integration into premium Teacher Walls, demonstration pods, serviced bollards, desks, benches, & modern science labs.

DO NOT SCALE

Contract No.

1. EXTERIOR : 16swg zintec steel, powder coated white Ral,9016

7. LIGHT : LED light fitting

2. INTERIOR : 6mm Thick clear acrylic sides and rear with unique cornerless posts.

3. BAFFLES : Rear air baffle 6mm thick clear acrylic gives 360 degree visibility.

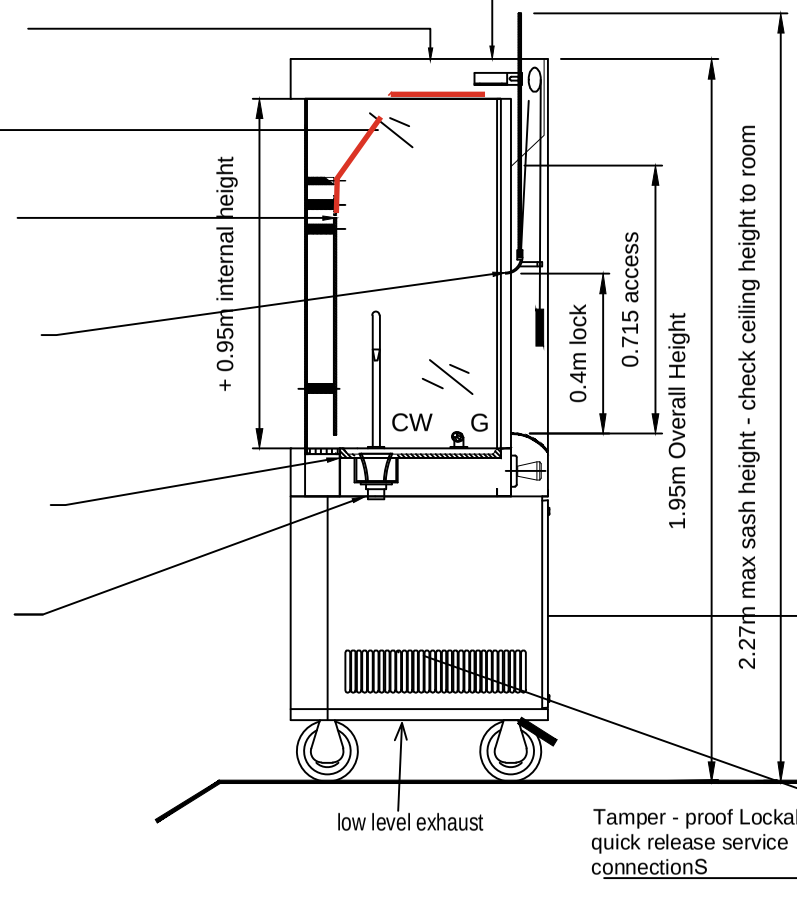
6. SASH : 6mm thick toughened glass, rising & falling in frictionless PVC track system. Counter balanced by fail-safe pulley and weights system.

4. WORKTOP : Solid grade laminate worktop with raised perimeter edges to form dished area.

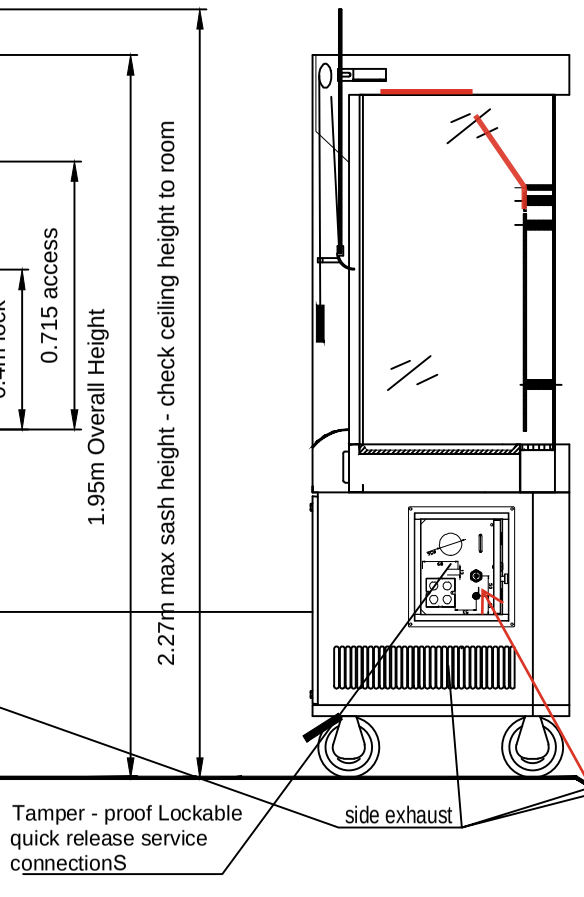
5. DRAINAGE : 90mm Dia. black circular drip cup with bottle trap & 2m flexible drain / waste.

8. SERVICES : Pre-plumbed & tested with quick release connectors for connection to "Docking Station" within the laboratory.

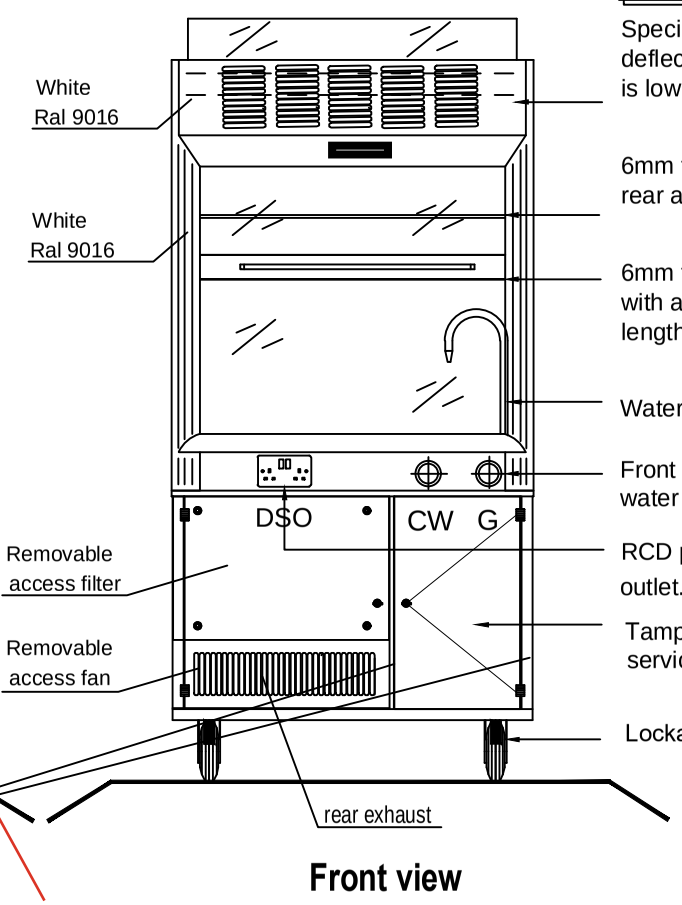
9. ELECTRICS : Power and light pre wired to low level with c14 removeable plug and lead.



Section view thru right hand side of unit



Section view thru left hand side of unit



Front view

Face velocity- Min 0.4m/s @ 0.4m sash opening height for safety.

Specially designed air bypass to prevent deflection of the bunsen flame when sash is lowered.

6mm thick clear acrylic rear panel and rear airflow baffle for high visibility.

6mm thick toughened glass sash panel, with aerodynamic sash handle and full length D pull.

Water & Gas outlet

Front control for remote water & gas service

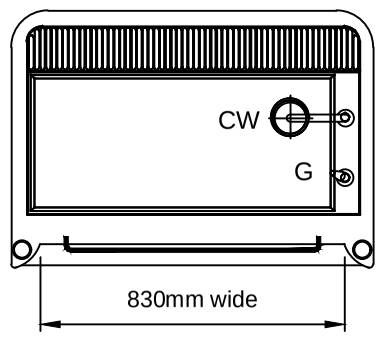
RCD protected double electrical socket outlet.

Tamper-proof lockable quick release service connections.

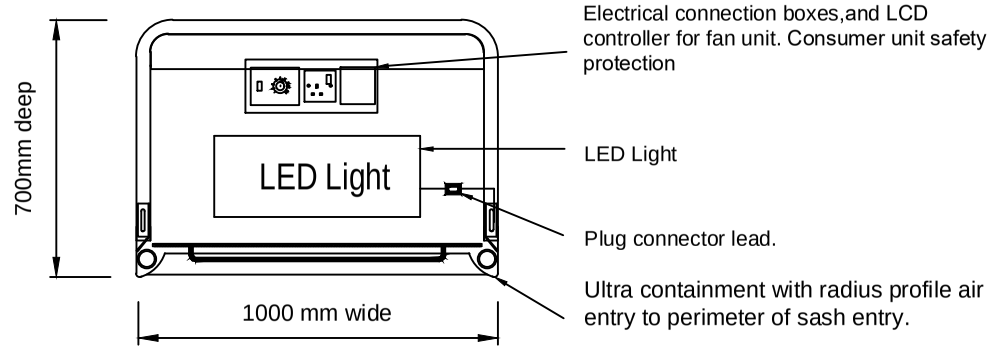
Lockable castors

Technical Specification

1. EXTERIOR : 16SWG Zintec epoxy powder coated textured finish - White Ral 9016.
2. INTERIOR : 6mm thick clear acrylic sides and rear wrap-around with unique cornerless posts.
3. BAFFLES : Rear air baffle 6mm thick clear acrylic gives 360 degree visibility.
4. WORKTOP : Black high pressure laminate worktop with raised perimeter edges to form dished area.
5. DRAINAGE : 90mm diameter black circular drip cup with bottle trap and flexible hose with 1.5" BSP male threaded outlet. Connection to mains / Docking station on site by others.
6. SASH : 6mm thick clear toughened glass, rising and falling in smooth PVC frictionless track system. Counter-balanced by fail-safe pulley and weights system.
7. LIGHT : LED light +400 Lux, located above a sealed panel.
8. SERVICES : Pre-plumbed and tested in approved braided hoses, to low level right rear side with quick release connectors for connection to a dedicated on site "Docking Station". Docking station fitted by others prior to arrival of cabinet.
9. ELECTRICS : Power and light pre-wired to low level, with c14 removeable plug and lead
10. CONTROLS : LCD touchscreen smart controller for face velocity visual indication



Sectional plan view



Plan view

Abbreviations

CW = Cold water GAS = Gas DSO = Double socket outlet with RCD protection.

Drawing title	Drawn by	Approved by	Rev.	Scale	Date	Drawing No.
COANDA mobile filter fume cupboard	D.NORRIS		A	1:20		PLS-10-100

The **Coanda** - carbon footprint friendly - just part of our commitment to protecting tomorrow's environment.

Company Overview

We are a quality company, specialising in Education fume cupboards for FF&E Academy, BSF, PFI, PPP and other long-term Department for Education, new-build and refurbishment projects.

Development

Developed to incorporate all the features of a sophisticated sliding sash fume cupboard with the benefits of carbon filtration technology. Utilising the most advanced carbon filtration techniques, the fumes are absorbed with near zero emissions, creating a safer working environment and un-blemished carbon footprint.

Safety

The mobile filtration fume cupboard provides complete operator and student safety when the sash is lowered. The unique transparent corner-less post system, enables the operator to view the whole of the class, whilst at the same time, the whole of the class can view the demonstration. With unique radius profiled **Coanda** air intake, operators can rest assured of optimum safety.

Operating down to >35dBa, the unit incorporates the most up to date technology and fan for whisper-quiet operation, making it ideal for a teaching environment.

Completely re-circulating the air within the laboratory ensures no expensive conditioned or heated air is dispersed to the environment. All steel edges are double folded for safety

The complete unit is protected by an RCD consumer unit for ultimate electrical safety

Commissioning

The mobile is installed quickly and efficiently by competent, trained engineers using tail-lift vehicles for Health and Safety, whilst installation keeping costs to a minimum.

Warranty

The **Coanda** comes with a 1 year warranty.*

Specifications

External Dimensions	1000w x 700d x 1950h
Internal Dimensions	900w x 525d x 950h
Airflow	485 m3/hr
Face Velocity (m/sec)	0.4
Containment CLEAPSS R9	Yes
Noise Level	>Achieves >35dBa
Internal Lighting	+400 lux
Main Carbon Filter Size mm	450w x 600d x 100h
Pre-filter size mm (w x d)	450 x 600 CLEAPSS Compliant
Pre-filter pack of 6 included	Change every 6mth
Construction	EPC white Ral 9016 for corrosion protection Fully curved rear acrylic to prevent dirt build-up easy to clean and maintain. Chemical resistant worktop, toughened glass sash for operator safety.
Fan	Brushless motor with built-in controllers,30–70% energy reduction.
Utility connections	Flexible 1m Water, Gas, Waste, Electric & security tether

Distrubuted in partnership by:

2040 NET ZERO EMISSIONS

CARBON NET ZERO