



Expert Lab Solutions

A breath of fresh air since 2005

CLEANCUBE

Mobile Range

NSP
Expert Lab Solutions

www.nsp.ie
041-982 1389



About us

NSP Expert Lab Solutions are a leading laboratory supply & service specialist company.

Our products and solutions are carefully selected and designed to ensure that Irish labs and pharmaceutical spaces can be elevated through working with the best, safest and most efficient equipment.

In line with our mission to **Bring a Breath of Fresh Air** to our clients, we hold specific focus on providing outstanding clean air technology.



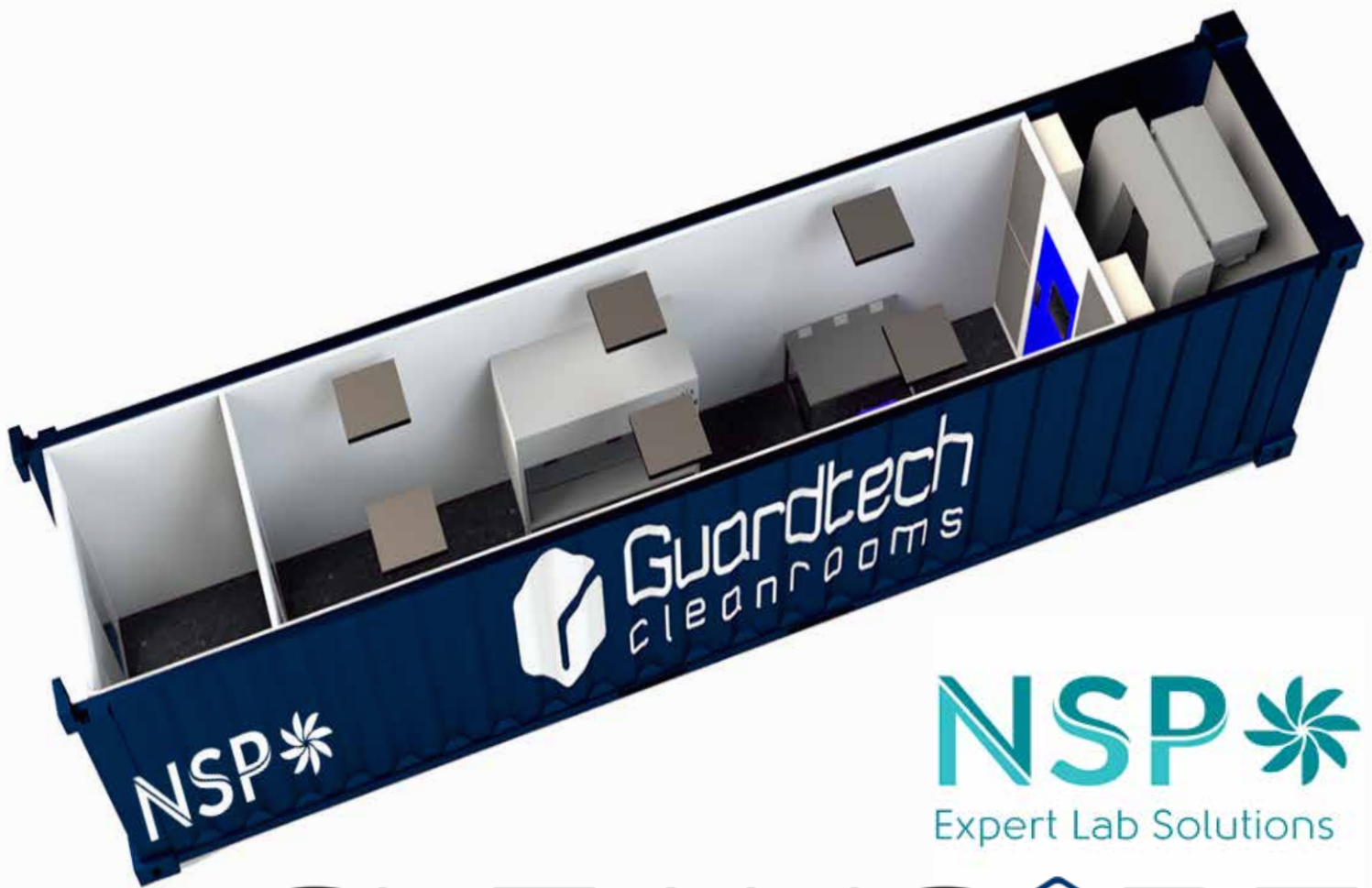
Our mission is to Bring a Breath of Fresh Air to our clients by providing expert advice, exemplary service and outstanding clean air technology at all times

Since we were founded in 2005 we have steadily grown our team of expert engineers who are equipped, skilled and fully accredited in the latest industry standards and manufacturer requirements. We are proud of the strong reputation we have built over our 15 years in business and we work hard to maintain an exceptional level of service at all times. We are accredited to ISO 9001:2008 since 2010 which was revised to ISO 9001:2015 in 2018.



We have built strong relationships with our clients who have chosen to partner with us over the years. These key relationships ensure that we are not only called upon to install new laboratory components, but our clients and customers know they can rely on our expert teams for on-going servicing, upgrades and troubleshooting.





NSP 
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CLEANCUBE

mobile labs

portable cleanrooms

CleanCube is a range of mobile cleanroom and laboratory solutions for rapid deployment situations where a controlled environment is necessary. Ranging from converted portable modular buildings and shipping containers to 7.5-tonne trucks and 3.5-tonne Luton box vans, the CleanCube range utilises existing portable solutions, cleverly configured to maximise every millimetre of useable space.



**There is no compromise on
environmental excellence or quality**

mobile labs

portable cleanrooms

Internally fitted out to the same high specification as state-of-the-art static cleanrooms and laboratories, with electrical and mechanical installation, fully configured to the needs of the end-user and the demands of the application. Supported with detailed technical information including drawing packs, operation & maintenance manuals, 3D models and renders.



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Commonly used as:

- Bio-safety laboratories (BSL 1, 2 & 3)
- Covid-19 testing stations
- Covid-19 diagnostic laboratories
- Temporary cleanrooms (ISO 5, 6, 7 & 8)

Internal fit-out options:

- H14 HEPA filtration (supply/exhaust)
- Temperature & humidity control
- 13-amp & 3-Ph power outlets
- Positive & negative pressure



box vans

CleanCube Box Vans provide modular cleanrooms and laboratories contained within the standard

confines of regular road network vehicles, either as 3.5-ton or 7.5-ton configurations. The body of the vehicle receives an internal structural exoskeleton; which

provides the framework for the attachment of the insulated steel-faced walls and ceiling composite panels, ensuring a rigid and roadworthy structure, with cleanable surfaces.



The room can be positively or negatively pressurised with H14 filtered air supply and environmental monitoring systems can be used to track room performance. LED lighting is provided ensuring a minimum of 500 Lux. Air con can be incorporated into design.

The floor can be laid as a coved resin or vinyl with ESD properties and doors are made with lightweight aluminium frames and powder-coated steel door leaf on self-closing mechanisms with stainless steel fixtures and locks.

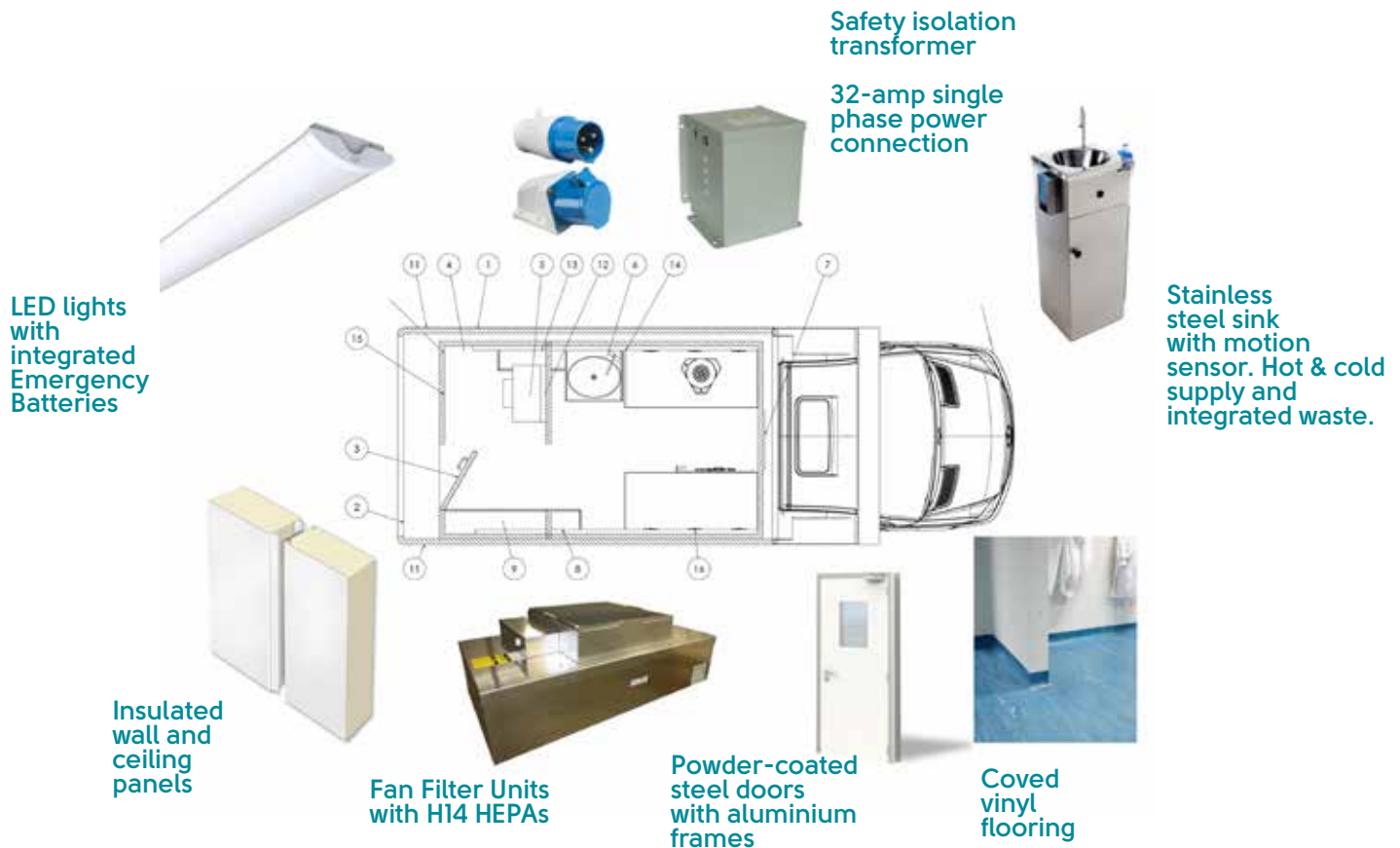
common configurations



Without Airlock



With Airlock



All CleanCubes are fully configurable and come with a detailed technical drawing pack and 3D model with renders for client review, approval and sign off. Units can be delivered as quickly as two to three weeks following Purchase Order and deposit payment.



CleanCube Box Van layouts can be designed with or without PAL (Personnel Airlock), H14 HEPA filtered supply and exhaust options, as well as being positive or negatively pressurised.

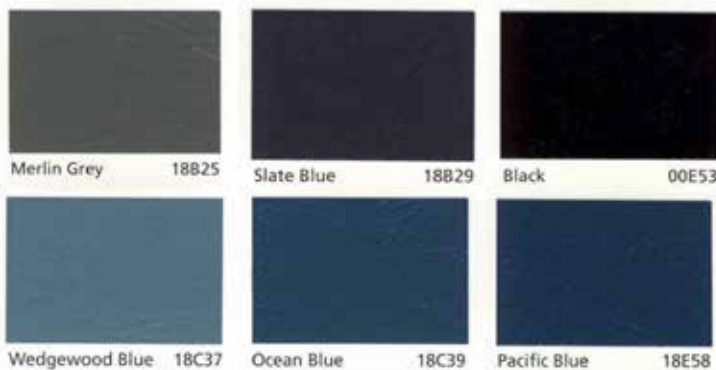


CLEANCUBE modular buildings

CleanCube Modular Buildings are an ideal solution for Irish applications. Offsite construction with onsite assembly drastically minimises the construction works required onsite, allows utilisation of

exterior spaces and the modular nature presents no restrictions on size or layout configurations.

Modular buildings allow for unrestricted cleanroom design and extensive mechanical & electrical fit-outs.



Bespoke Modules:

Far greater flexibility is provided with bespoke modules, these are available in variable lengths of up to 12m, widths up to 4.3m and heights of 4.1m. Constructed from the same materials but allowing for more precise facility sizes and room layouts. Slightly longer lead times are applicable to these products.

Standard Modules:

A strong flexible modular system with standard module lengths of 7.3m (24ft), 9.75 (32) ft and 12.2m (40ft) in a fixed width of 3.05m (10ft) wide. Units can be stacked end on end and side by side to create clear open plan or multi-storey areas. All steel construction, flat-sided exterior finish, easy to dismantle, move and re-use. Join multiple modules together to create optimal facility footprint, base units available from stock.

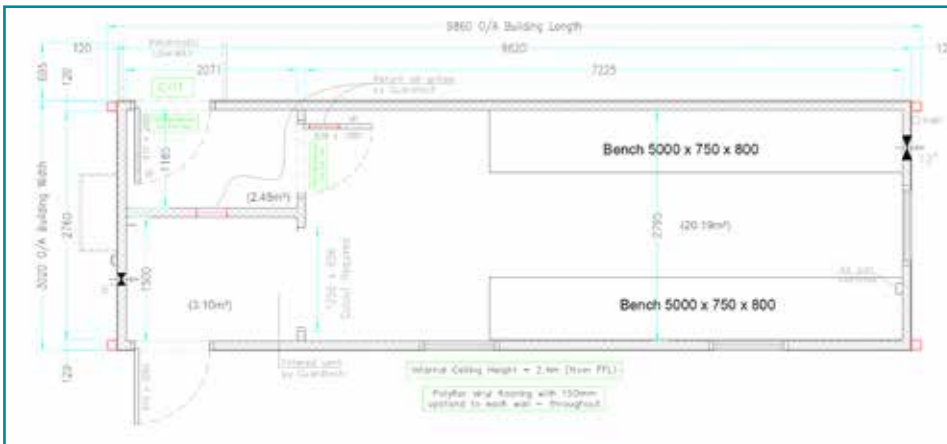
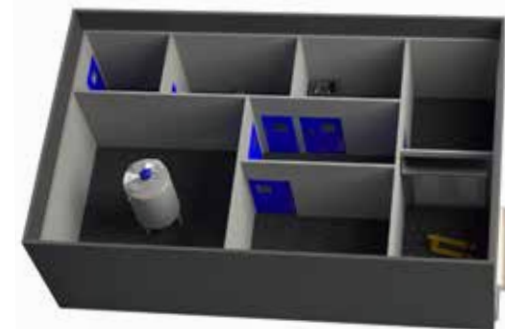
- Length: 7.3m, 9.75m & 12.2m
- Width: 3.05m
- Height: 3.6m

- Length: Variable up to 12m
- Width: Variable up to 4.3m
- Height: Variable up to 4.1m

- Plastisol steel bonded to 9mm ply
- Plasterboard internal lining
- Insulated with 90mm fibreglass
- Fastened to 95 x 34 wall studs

- 3kn/m² Floor Loading
- Hot rolled steel ring beam
- Galvanised steel floor joists 406mm centres
- Insulated with double Floortherm insulation
- To provide .25Wm² °C heat loss
- 22mm T&G chipboard flooring

- 0.75kn/m² roof loading
- Mono pitched or dual pitched roof
- Soffit roof with plastic rainwater goods
- Through roof ventilation
- Insulated with 180mm Fibreglass
- 15mm OSB T&G roof deck finished with PVC membrane
- UPVC rainwater goods

[illegible]



CLEANCUBE

containers

CleanCube Containers are an easily transportable platform for hosting a lab or cleanroom, either for applications where the unit needs to be moved often, or for applications where space is at a premium. Available as 20ft or 40ft high cube, vertical laminar flow and internal head room of up

to 2.4m, ISO5, 6, 7 & 8 as well as BSL1,2 & 3 all achievable. Temperature and humidity control, 1-ph 13-amp and 3-ph electrical power, data, compressed air and gas services, extraction, vacuum, furniture and equipment can all be accommodated and pre-installed by our dedicated Installation Team.



No external modifications are made and no load is imposed on the walls or ceiling of the structure – therefore containers can ship via normal cargo methods, decreasing shipping times and saving transportation costs.

External overhead plant decks can ship separately to maximise the internal footprint if bespoke AHUs are required. Otherwise footprint can accommodate a small plant room for some air handling, compressors and other plant.

common configurations



20ft without Airlock



40ft with Personnel Airlock (PAL) & Plant Room

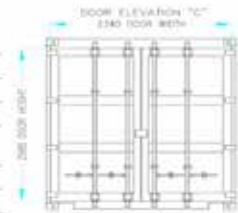


SPECIFICATIONS: 20ft High Cube container

	Length:	Width:	Height:
Outside dimensions	6058 mm	2438 mm	2896 mm
Inside dimensions	5898 mm	2344 mm	2695 mm
Internal door opening		2330 mm	2578 mm
Tare	2320 kg		
Cubic capacity	37.30 m ³		
Payload	28160 kg		

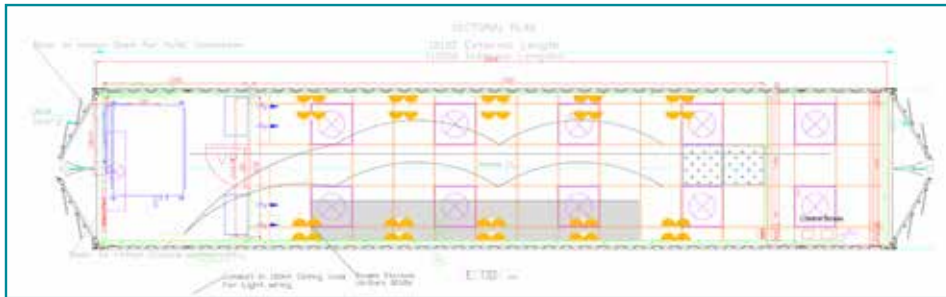
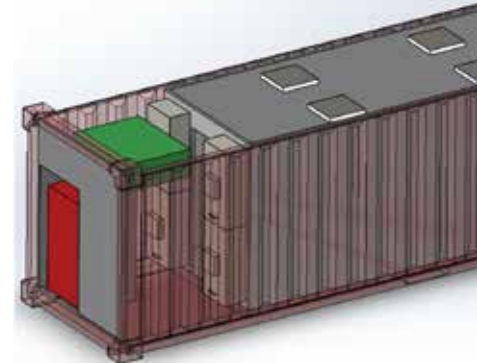
SPECIFICATIONS: 40ft High Cube container

	Length:	Width:	Height:
Outside dimensions	12192 mm	2438 mm	2896 mm
Inside dimensions	12032 mm	2344 mm	2695 mm
Internal door opening		2330 mm	2578 mm
Tare	3950 kg		
Cubic capacity	76.20 m ³		
Payload	26530 kg		

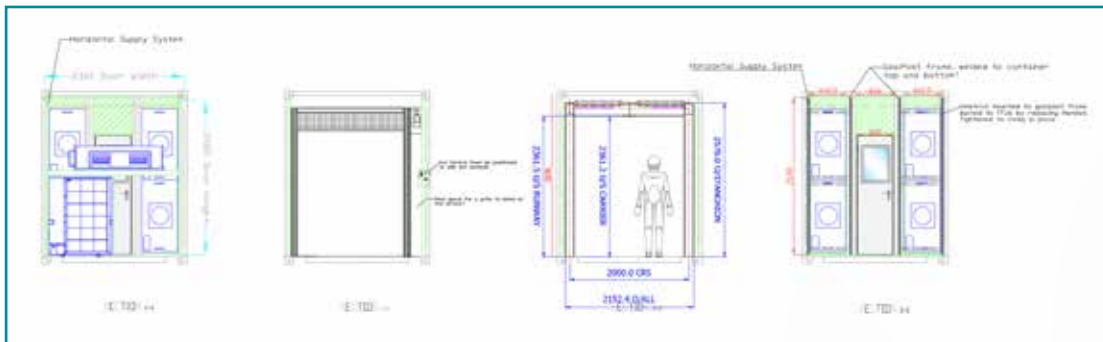


Base Specification

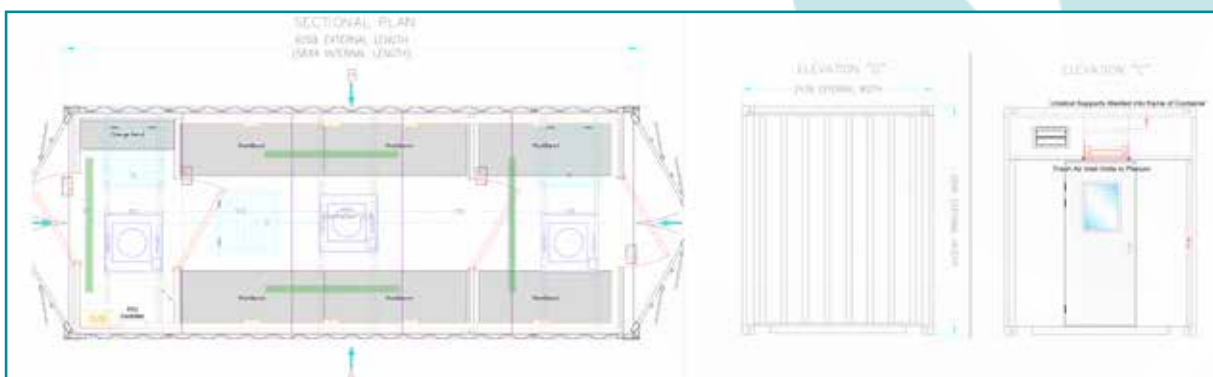
- CSC plated (gross weight) max 30-ton
- All Cor-Ten steel construction
- 28mm marine plywood floor on steel cross members
- Exterior hinged double doors at each end
- Two locking bars on each door with factory-fitted lockbox
- 2 x forklift pockets on each side
- 4 x fresh air vents
- Available in a number of colours
- Can be plated and sign written externally



Example of Horizontal Airflow Cleanroom with VRF Air Conditioning



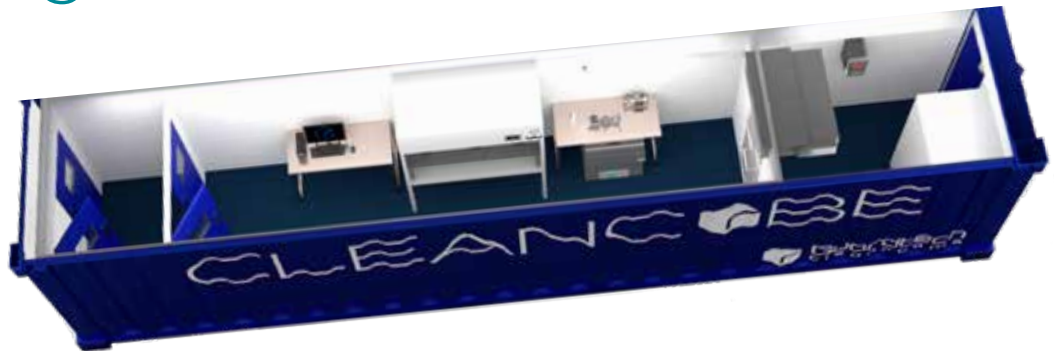
20ft Vertical Airflow Cleanroom Container Layout



base specifications

shipping containers

20ft/40ft high cube tunnel containers; all Cor-Ten steel construction, two locking bars on each door, two sets of double steel doors, two forklift pockets each side and 28mm marine plydeck. CSC plated and



re-certified after modifications to allow for transport via international standard shipping cargo network or Euro road network.

Maximum internal dims:

20ft: 6m (L) x 2.2m (W) x 2.7m (H) GW 30 Ton

40ft: 12m (L) x 2.2m (W) x 2.7m (H) GW 30 Ton

box vans



3.5t/7.5t box van, GRP body construction, rear roller shutter or barn doors, plyboard three-seater front cab. 3.5-ton can be driven on a standard Irish licence. 7.5-ton requires a specialist licence and a tachograph will also need to be installed and operated.

Maximum internal dims::

3.5 Tonne 4.5m (L) x 2.2m (W) x 2.7m (H) GW

7.5 Tonne 7.5t: 5.7m (L) x 2.2m (W) x 2.4m (H) GW 7.5 Ton



modular buildings: single bay

Modular buildings are constructed from hot-rolled steel ring beams incorporating galvanised steel floor joists, steel corner columns and steel lattice roof beams. Roof decking 15mm tongue & grooved timber fitted with Fatra Ecopro PVC fire-rated membrane, soffit roof construction and plastic uPVC rainwater goods. Timber wall studs clad in plastisol-coated steel exterior finish. Insulation provided by Ecobrite Foiltherm and 90mm fibreglass insulation.

Loading:

5kn/m² floor, 0.75kn/m² roof.
End to end and side by side module (bay) linking. UPVC or powder-coated aluminium windows and standard steel multi-point locking doors of UPVC or powder-coated steel.



modular buildings: multi bay

Maximum internal dimensions:

Single bay: 4.5m (L) x 2.2m (W) x 2.7m (H) GW 3.5-ton

Multi bay: Can be any number of single bays connected together or stacked to create desired layout.

internal fitout

Structural material options • Mechanical & electrical specifications

modular panels



Powder-coated CR4 mild steel panels with polyisocyanurate PIR insulated core, interlocking joints, 50mm thickness to form walls and ceiling. Highly durable, cleanable, chemically resistant, silicon sealed.

flooring

Homogenous vinyl floor reinforced with cross-linked polyurethane, UV-cured, hold-welded joints. Coved 100mm up the wall over underlay former and capped. Copper-grounded anti-static vinyl also available.



rapid rise doors

PVC door with stainless steel or anodized aluminium frame and drum cover, contactless motion-sensor activation. Rapid open-and-close speeds, interlocked with break glass and status indicators.



doors

Powder-coated CR4 mild steel door leaf with 45mm Dufaylite-insulated core, flush-mounted vision panel and stainless-steel fixtures and fittings. Aluminium wrap-around frame. Interlocked.





power source

Safety isolation transformers on all CleanCubes provides the mobile unit with independent grounding from the connected power source. 32amp male hardwired plug exterior-mounted.

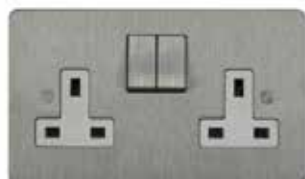


led lights

Powder-coated steel light units, flush mounted into the ceiling panels with drop-down hinged diffuser. Also available as surface-mounted aluminium LED batten luminaires for laboratories.

electrical

Stainless steel or white plastic 13amp sockets, mounted flush or in three-way PVC compartment trunking. CAT6 network sockets and 16amp or 32amp three phase sockets also available.



filtration

Fan filter units (FFU) with H14 HEPA filters and G4 pre-filters, provide 1,000m³/hour of filtered air. HEPA filtration can also be placed on the exhaust to provide BSL-3 compliance.

air conditioning

Temperature control via VRF split system serving a plenum for cleanrooms or wall-mounted recirculating units for labs.



Humidity control also provided via upflow units or separate desiccant wheels. External condensers can be contained in attached plant rooms or mounted on CleanCube exterior.

gas

Compressed air and nitrogen via compressors and generators housed directly within the cleanroom or lab – or in an enclosed plantroom. Pipework, point of use fittings, regulators and hook-up connections can also be put in place for onsite connection to cylinders.



furniture & equipment

Standard & bespoke options available

biological safety cabinets

Class II microbiological safety cabinets offer the highest level of operator, product and environmental protection from infectious/biohazardous aerosols. Suitable for microbiological agents assigned to biosafety levels one, two, three, or four.



cabinets

Cabinets manufactured from Trespa or grade 304/316L stainless steel, available with a range of door and drawer configurations, stainless fixtures and fittings. Available on casters or levelling legs.



sinks

Self-contained stainless steel sinks with container-fed hot & cold water supply and separate drainage vessel. Motion sensor-activated tap, soap & towel dispenser attached. Alternative mains supply/drainage sinks also available in the range.

workbenches

Grade 304 or 316L stainless steel frames made from 50mm box section with a Trespa or stainless steel worksurface. Framework on levelling legs with support bars on 45° diagonal offset to reduce ledges, available with upstands.



stepover benches

Available as standard seating benches on levelling legs or with storage compartments underneath, for shoes, garments, PPE and consumables. Manufactured from Trespa or grade 304/316L stainless steel.



nitrogen generators

A reliable and efficient alternative to conventional high-pressure cylinders, N2 generators have in-built compressors and convert ambient air to N2 process gas at a maximum purity of 99.9995% at a maximum flow rate of six litres per minute.



laminar flow benches

Vertical or horizontal laminar flow workbenches are H14 HEPA-filtered work stations that provide product with an upgraded air classification. The units are manufactured from powder-coated steel



transfer hatch

Grade 304/316L, powder-coated steel or polypropylene transfer hatches, electromagnetically or mechanically interlocked with vision panels and seamless welds for contained product transfer. Also available as trolley hatch.



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