

PATENTED



- **3D environmental complexity on two floors:**
enhanced animal welfare
- **Animal positive behaviour:**
more reliable research outcomes
- **Optimized multiple sealing**
with no need for latches:
maximum protection for animals
and facility staff
- **Great visibility-focused design:**
easy daily check



 **HOUSING**

 **TECNIPLAST**
innovation through passionSM



Double Decker Rat IVC Green Line

Animal Welfare/Protection for Operators and Animals

1&2

Introduction

The Sealsafe® PLUS range of IVC products features a PATENTED cage design, consisting of a soft silicone gasket that protrudes radially all around the cage base rim: a perfect sealing is simply achieved by placing the top on the cage body, through the radial interference between gasket and cage top.

Consequently, the vertical compression (commonly provided by the use of latches) of the silicone gasket between cage base and top is not required:

- no latches for the best ergonomics
- no need for latches to achieve excellent containment and high protection

1/Animal Welfare

- Double Decker is the only rat cage featuring a two-level, enriched, environment: thanks to this three-dimensional space, the animals exhibit **more positive behaviour** like **climbing, jumping** and standing up in **bi-pedal posture**.
- Air inlet and outlet valves above animal height: **no air drafts at animal level, avoiding risk of stress and heat loss**, as reported in the scientific literature.
- Increased positive behaviour means **more reliable research outcomes**.
- Stand-alone Air Handling Unit: Easy, Smart and Sky Flow provide safe ventilation **without transmitting vibrations** to the rack, ensuring **standardization of the experiment**.

2/Protection for Operators and Animals

- PATENTED cage sealing design: **optimal seal and protection without need for latches**.
- Large Microbiological filters (VFE* \geq 99.999987%, BFE* \geq 99.999937%) at cage level, ensures optimal gas exchange as well as an **ideal protection also during procedures or in case of power failure**.
- DOP tested Air Handling Unit's HEPA Filters provide **high protection against bacteria, viruses and allergens**.

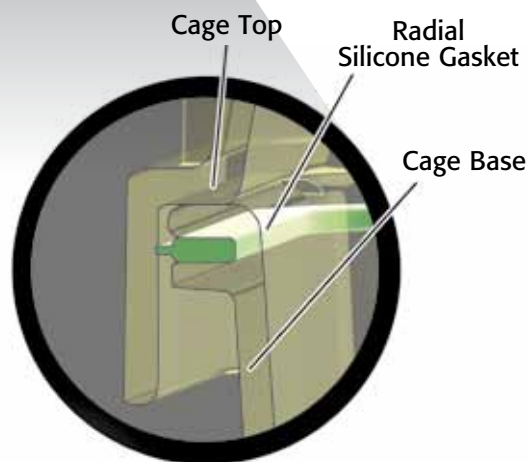
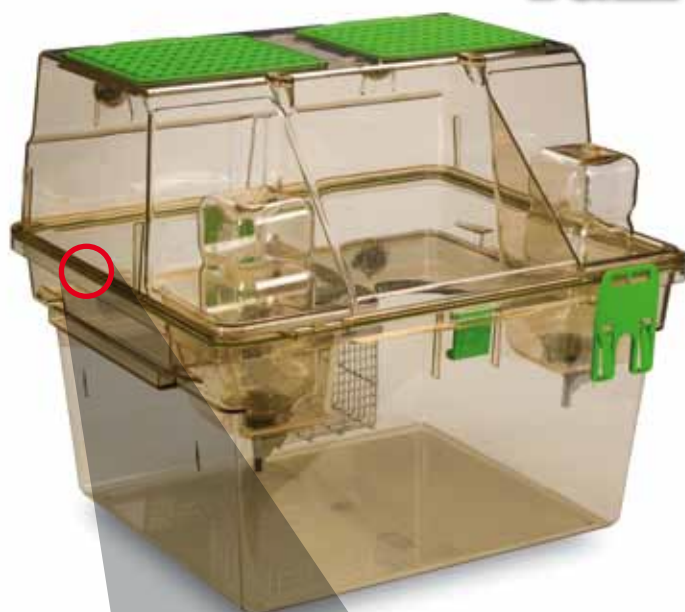
*VFE: Virus Filtration Efficiency. BFE: Bacteria Filtration Efficiency.

3/Ergonomics

- 1800 sq cm floor area designed to ensure **perfect visibility** on both floors and reduce the cage footprint for an **easy handling**.
- No latches for a **faster cage change**, while **protection is always ensured** by the patented cage sealing.
- Great visibility-focused design and Automatic Visual Docking Indicator with Cage Self-Locking System to help operators perform a **quicker daily check**.
- External self-centering water bottles: **quicker bottle change** without moving the cage from the rack.
- Cage top with hatch for **easy access to the cage occupants**.

4/Low Running Costs

- Stand-alone air handling unit can manage up to 4 single-sided racks (or 2 double-sided): **energy saving with lower maintenance costs**.
- ECM DC-Blowers means **low power consumption and less maintenance**.
- Quick daily check, easy access to the cage and quicker bottle change mean **low labour costs**.

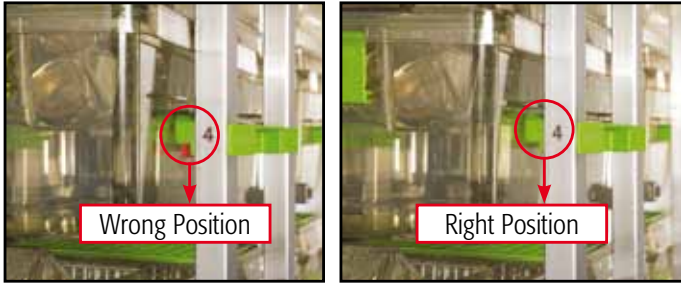


Patented cage design / Gasket-top perfect adherence: sealing with no need for vertical compression



Air valves above animal height on both levels

Ergonomics **3**



Automatic visual docking indicator



Hatch for easy access to the cage occupants

TECHNICAL SHEET

Double Decker cage

Floor Area:

1862 cm² • 288.61 sq inch

Overall Dimensions (W x D x H):

462 x 403 x 404 mm • 18.20 x 15.87 x 15.89 inch

Plastic Type:

H-TEMP (Polysulfone): 3 years warranty

Cage Body:

Radial silicon gasket (occlusive seal); High stackability

Feeder Capacity:

1.43 l • 48.35 fl oz (US) • 50.33 fl oz (UK)

Top:

Equipped with front hatch; filter retainers with silicon gasket; Selfcentering indentations for external water bottles

Water Bottle:

Up to 700 ml • 23.67 oz (US) • 24.64 oz (UK) capacity each
External with Oring for perfect sealing

Cage Filter Efficiency:

Microbiological filter
Bacterial Filtration Efficiency (BFE) ≥ 99.9999937%
Virus Filtration Efficiency (VFE) ≥ 99.999987%

Double Decker rack

Cat. N.	Configuration	Specie	Overall Dimensions (L x W x H) - mm / inch
2GR12DD	12 cages (3 w x 4 h) Single sided	Rat	1458 x 500 x 1925 (1978*) / 57.40 x 19.69 x 75.79 (77.88*)
2GR16DD	16 cages (4 w x 4 h) Single sided	Rat	1934 x 500 x 1925 (1978*) / 76.14 x 19.69 x 75.79 (77.88*)
2GR24DD	24 cages (3 w x 4 h) Double sided	Rat	1458 x 888 x 1925 (1989*) / 57.40 x 34.96 x 75.79 (78.30*)
2GR32DD	32 cages (4 w x 4 h) Double sided	Rat	1934 x 888 x 1925 (1989*) / 76.14 x 34.96 x 75.79 (78.30*)

* With removable supply plenum

Low Running Costs **4**



- Energy-saving and Eco-compatible.
- Light and ergonomic.
- Safe for animals/operators/ environment.
- User firendly.
- Multilinking: one AHU serves up to four racks.
- High monitoring and security: Remote Alarm System (RAS) and Wireless Data Management (WDM).



Options

For Cage:

- Cage body with grommet for autowatering
- Top without front hatch
- Top with depressions for disposable water pouches
- Vertical or Horizontal flip up plastic card holder
- High capacity food hopper
- Red sky deck
- Raised floor grid

For Rack:

- Rack with automatic watering system
- Quick disconnecting magnetic joints (connecting AHU to rack or rack to rack)
Flexible hoses (available in several lengths)

Accessories

- Electric lifter

Related Products

To maximise operational efficiency and learn more about these products contact your local representative.



Sealsafe Plus RAT:
high containment,
protection from allergens,
high density
and practicality of use.



BSD60.
Cage changing station
with a large working area.



900 GP Series Rack Washer: designed specifically to meet the throughput needs of medium to large size facilities, these machines will live up to your highest expectations in terms of maximum cleaning efficiency, safety, environmental impact and quality construction.

ENVIRONMENTAL SUSTAINABILITY: MINIMIZE IMPACT MAXIMIZING VALUE

What Tecniplast did to become leader in sustainability:

Company:

- Quality Management System Certification according to ISO 9001 and Environmental Management System Certification according to ISO 14001.
- Certified Environmental Report according to Eni Foundation Enrico Mattei Guidelines.

Products:

- Life Cycle Assessment (LCA) according to ISO 14040 and ISO 14044.
- Carbon Footprint according to PAS 2050.
- Environmental Data Sheet according to ISO 14025.
- Contribution to credits under the LEED rating system.



ISO-9001
Cert. n° 0875



ISO-14001
Cert. n° 0256A/0



TECNIPLAST

HEADQUARTERS

ITALY | Tel. +39 0332 809711 • www.tecniplast.it • E-mail: tecnicom@tecniplast.it

SISTER COMPANIES

AUSTRALIA/NEW ZEALAND | Tel. + 61 2 8845 6500 • www.tecniplast.it • E-mail: info@tecniplast.com.au

CHINA | Tel. + 86 21 50810920 • www.tecniplast.cn • E-mail: tecniplastchina@tecniplast.it

FRANCE | Tel. 04 72 52 94 41 • www.tecniplast.fr • E-mail: info@tecniplast.fr

GERMANY | Tel. 08805 921320 • www.tecniplast.de • E-mail: info@tecniplast.de

UNITED KINGDOM | Tel. 0845 0504556 • www.tecniplast.it • E-mail: info@tecniplastuk.com

JAPAN | Tel. + 03 5770 5375 • www.tecniplast.it • E-mail: info@tecniplastjapan.co.jp

USA/CANADA | Toll Free: 877.669.2243 • www.tecniplastusa.com • E-mail: info@tecniplastusa.com

To find your local distributor, please visit www.tecniplast.it

Tecniplast reserves the right to change or modify product and or specifications without notice or obligation.
Double Decker is a Tecniplast trademark.