

Restricted-access barrier systems

Restricted Access Barrier Systems (RABS) are becoming increasingly popular within aseptic processing; the reason being that they offer effective product protection by providing a high level of separation between operators and the critical aseptic core. By using a combination of a physical barrier and dynamic airflow, the product protection that it can provide approaches that of an Isolator and makes it a viable alternative technology.

It should be noted however that RABS offer no means of containment for operator or environmental protection, should the product under manufacture be a toxic product or API (active pharmaceutical ingredient) carrying an OEL (Operator Exposure Limit) or a live viral product.

When the surrounding environment is ISO 6 and other procedural elements are in place RABS will provide ISO 5 environment in the critical zone. For operations which do not need to be performed in the sterile core (for example, over-sealing) a RABS will provide ISO 5 class laminar air flow with an ISO 7 background.

RABS can either have Passive or Active ventilation:

- **Passive RABS**, Utilises the clean air from the cleanroom ceiling HEPA Filters and ventilation.
- **Active RABS**, Clean air is derived from on board HEPA filters and Fan(s) or via direct connection to a central air-handler.



Telstar RABS offer flexibility in design and fulfil current cGMP and regulations that are required in today's Aseptic manufacturing facilities. Telstar is one of the world leaders in customized systems and continuously innovates in order to offer the best solution to satisfy client needs.



RABS can be either 'Open' or 'Closed':

- **Open RABS**, When the air has passed through the protected zone it spills into the cleanroom with no further filtration.
- **Closed RABS**, When the air has passed through the protected zone it is recirculated back to the supply HEPA filters or is filtered before it spills into the cleanroom.



- Simplicity in design with 304/316L stainless steel Frame
- Fully opening vision panels in 10mm toughened safety glass or laminated glass
- Glove port access in vision panels using HDPE elliptical glove ports offering the maximum possible operator arm movement
- Uni-directional downward laminar flow over the whole area of the RABS at 0.45m/sec +/- 20% provided by either micro-perforated grill or polyester air distribution screen
- EU Grade A (ISO5) conditions inside the barrier (with at least ISO 7 surrounding)
- Active RABS use high efficiency EC fans (Green Tech)
- Active RABS fitted with either grade H14 HEPA filters or U15 ULPA filters
- Filter test ports
- Pressure monitoring of filter differentials using 'magnehelic' pressure gauge
- Automated air velocity control to compensate for filter burden
- Can be furnished with specific manufacturers transfer ports
- Can be furnished with environmental monitoring services entry points and utilities
- Full qualification services (DQ,IQ,OQ)



Check for the nearest Telstar office at
<https://www.telstar.com/international/>

Headquarters

Av. Font i Sagué, 55 T +34 937 361 600
08227 Terrassa (Spain) F +34 937 861 380

www.telstar.com
marketing@telstar.com