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Product Datasheet

Biostat STR® 200 L Virtual Reality Training and Assessment

On-demand digital training in a safe virtual environment, independent of trainer and system availability.

Benefits

- On-demand training with the flexibility to train operators at their own pace and convenience
- Cost-efficient training alternative, by eliminating the dependancy on trainers, systems and venues
- Accelerated operator qualification with a standardized training
- Safe and controlled environment for operators to practice their skills without risk of contamination or product damage
- Improved engagement and retention for operators through interactive and immersive training
- Decreased carbon emissions associated with training by eliminating the need of travel

Product Information

The Biostat STR® 200 L Virtual Reality Training provides a fully immersive virtual reality experience, guiding users on how to prepare the single-use Flexsafe STR® bag for the cultivation run, covering bag and sensor installation, establishing aseptic connections, sensor deinstallation and bag removal. The training is designed to provide a realistic and interactive experience, allowing operators to practice their skills and gain confidence in a virtual environment before final qualification on the Biostat STR® 200 L.

Product Description

The Biostat STR® 200 L Virtual Reality Training includes the following modules:

- Unpacking the 200 L Flexsafe STR® bag
- Installing the Flexsafe STR® bag
- Inflating the Flexsafe STR® bag
- Sensor installation
- Aseptic connections
- Deflating the Flexsafe STR® bag
- Sensor deinstallation
- Deinstalling the Flexsafe STR® bag

The Biostat STR® 200 L Virtual Reality Training requires two operators to work together during the training. Users can select between two roles, main or support operator, and complete the training according to their roles from anywhere in the world. If a user would like to complete the training on their own, a virtual avatar assits the user to complete the training.

The Biostat STR® 200 L Virtual Reality Training has two interactive training modules that allow operators to practice and assess their skills:

- **Practice:** Guidance elements guide the trainees throughout the training by giving detailed information on the training steps.

- **Assessment:** The assessment mode enables operators to assess their knowledge and skills. A completion certificate can be downloaded upon completion of the assessment module.

Benefits of training operators with the Biostat STR® 200 L Virtual Reality Training

Training your operators with the Biostat STR® 200 L Virtual Reality Training comes with several advantages.

- **Reduce operational costs.** The Biostat STR® 200 L Virtual Reality Training provides on-demand training independent of the availability of trainers, systems and venues. It allows you to train your operators without interrupting the production process, eliminates the need for expensive equipment, travel costs and venue rentals, making it a cost-effective option for organizations of all sizes.

- **Bring qualified operators faster to the shop floor.** The Biostat STR® 200 L Virtual Reality Training allows you to qualify your operators more quickly by eliminating the need to wait for trainer or system availability.

- **Increase engagement through fully immersive training.** The Biostat STR® 200 L Virtual Reality Training allows operators to fully immerse themselves in realistic and interactive simulations of operating the Biostat STR® 200 L, creating a highly engaging and memorable learning experience which leads to better retention of information.

- **Train your operators in a safe environment.** The Biostat STR® 200 L Virtual Reality Training provides a safe virtual environment for trainees to learn and explore without the risk of contamination or product damage.

- **Get firsthand experience while waiting for your systems to arrive.** The Biostat STR® 200 L Virtual Reality Training allows operators to become familiar with the Biostat STR® 200 L equipment and its functionalities, even before your systems are delivered. Your operators will have time to practice, increasing their confidence and competence through realistic simulations and feedback.

- **Evaluate the knowledge of your operators.** The Biostat STR® 200 L Virtual Reality Training enables you to assess knowledge of your operators and create a standardized certification process throughout your organization.

- **Ensure standardized training throughout your organization.** The Biostat STR® 200 L Virtual Reality Training can be accessed from anywhere in the world, ensuring a standardized learning experience for your operators and trainers alike.

- **Decrease carbon emissions associated with training.** Operators can access the Biostat STR® 200 L Virtual Reality Training from anywhere in the world, without the need to travel to production or training sites, reducing the carbon emissions associated with transportation for training.

- **Retrain your operators on a regular basis.** The Biostat STR® 200 L Virtual Reality Training enables you train and qualify your operators at regular intervals ensuring consistent experience with the standardized training.

Technical Requirements

For taking the Biostat STR® 200 L Virtual Reality Training, you need:

- A VR headset that is compatible with the VR training software.
- A computer or device that meets the minimum requirements for running the VR training software.
- A stable internet connection to download and access the VR training software.
- A physical room with sufficient space.

Supported Virtual Reality (VR) Headsets

HP Reverb G2
Meta Quest 3 / Meta Quest 2

Physical Room Recommendations

Before use, ensure there is enough space around you. Make sure that there are no other persons near you whom you could injure and that there are no objects around you that can be damaged or injure you.

Size	A physical room with the size at least 2 x2 m is needed for your VR set-up (desk, PC/laptop, head-mounted display). Make sure to mark the individual areas on the floor and to leave some space between each area. It is recommended that the user use these boundaries to set up his/her guardian area to prevent any collisions while using VR.
Floor and ceiling	A room in which the floor doesn't reflect light should be chosen for the sensors of the head-mounted display to function properly. Marble or tiled floors may impact equipment performance. Other reflective surfaces, such as mirrors or windows, may also interfere with the tracking sensors. Make sure that the ceiling is not too low or have low-hanging lamps/fans, so that the user has enough space to move without the danger of collision.
Installation	The PC/laptop requires sufficient air supply while running. Ensure that it is installed in an open area, e.g. on a laptop stand, shelf, table, or similar.
Ventilation	As heat will be generated, the room should have a ventilation system or windows that can be opened.
Cable management	Set up a cable management system to keep the cables in order and prevent any tripping hazards. A ceiling-mounted cable management system is recommended.

Computer Requirements

Component	Recommended specifications
Processor	Quad-core Intel or AMD, 2.5 GHz or faster
Graphics card	NVIDIA RTX 3060 (Alternatives: RTX 2070 / NVIDIA GTX 1080) / NVIDIA Quadro RTX 3000 or greater
Memory	8 GB + RAM (16 GB RAM recommended)
SSD storage	1 TB
Operating system	Windows 11 / Windows 10 (May 2019 update or later for HP Reverb G2)
USB ports*	1 X USB 3.0 TYPE C
Video output*	DisplayPort 1.3

* USB Ports and Video Output depends on the requirements of the used VR headset. The specified requirements match with HP Reverb G2.

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