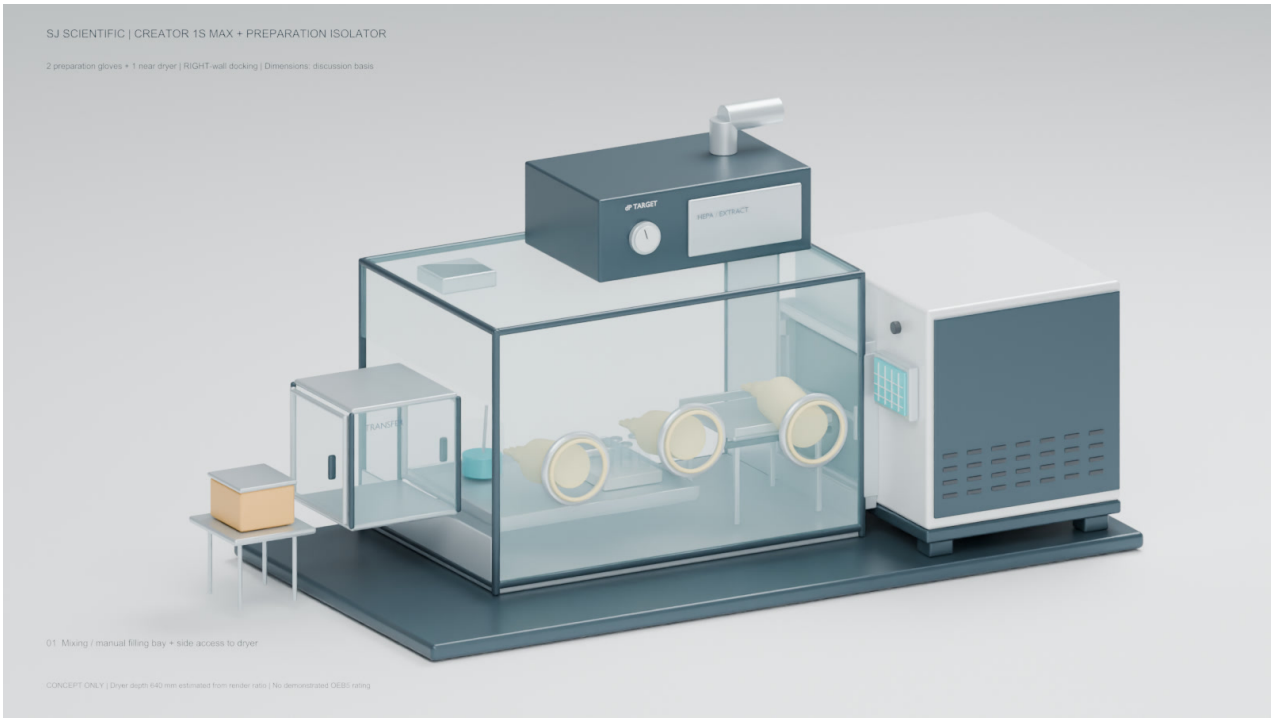
Creator 1S Max Three-glove preparation isolator

DESIGN CONCEPT. Not a delivered installation, OEB5-qualified system or aseptic performance result.

The design brief combines liquid mixing, manual vial filling and transfer to a 0.12 m² research lyophilizer. Putting all the gloves close to the chamber would leave too little usable preparation space. Rev. G instead puts two gloves across a left-side bench and one at the right-hand dryer interface. This is a customer-driven engineering concept, not a delivered isolator or a documented production result.



Rev. G design concept: a two-glove preparation area on the left and one glove near the right-wall lyophilizer interface.

Two gloves for preparation, one near the chamber

From the operator position, the enclosure is on the left and the Creator 1S Max is on the right. The chamber door faces left into the enclosure right wall, at 90 degrees to the glove face. The HMI/control bay stays outside the enclosure. The cooled shelf is fixed; a removable vial carrier and support can be assessed without describing the cooled shelf as a pull-out shelf.

The right-hand glove is a proposed access point, not proof of one-handed loading or latching. A representative carrier, filled vials, glove length, door sweep and latch force must be tried together. Support during transfer may be necessary.

Preparation workspace

All dimensions are in millimetres. Proposed values are for review, not fabrication or site installation.

Item	Dimension / target	Evidence status
Dryer front width / height	800 / 750.10 mm	Drawing-supplied
Dryer depth	Approx. 640 mm	Render-ratio estimate, not measured
Enclosure W x D x H	1200 x 800 x 800 mm	Proposed; width along glove face
Clear preparation area	600 x 450 mm	Proposed target
Removable spill tray	Approx. 650 x 550 mm	Proposed 304 stainless steel; compatibility review required
Glove ports	3 x nominal diameter 200 mm	Proposed
Glove centres from left wall	250 / 630 / 1030 mm	Proposed
Glove centre heights from base	350 / 380 / 350 mm	Proposed; reach trial required
Transfer hatch outer / usable target	350 x 350 x 350 / 300 x 300 x 300 mm	Proposed; two-door interlock

Model basis and drawing-specific inputs

The current English Creator 1S Max specification table gives one 300 x 400 mm shelf (0.12 m²), shelf control from -50 to +60°C, minimum shelf temperature ≤-60°C and condenser temperature ≤-85°C. These are product reference values, not results measured in this proposed enclosure. Standard 1S and Max are different configurations.

The design-input front width and height below are drawing-specific. The approximately 640 mm depth is estimated from an earlier render, not measured. They do not replace the general 1020 x 810 x 790 mm product-listing envelope plus external pump. Final integration requires the approved drawing for the actual ordered unit.

Interface and footprint

Item	Dimension / target	Evidence status
Adapter axial allowance	50 mm	Proposed
Reserved interface region	500 x 410 mm	Provisional; not a released opening or seal; bottom height B unknown
Top filter module	700 x 450 x 250 mm	Proposed
Equipment envelope W x D x H	2240 x 1100 x 1050 mm	Proposed; excludes stand, exhaust stub, staging table and service clearances
Common support footprint / height	2340 x 1200 / 700 mm	Proposed option
Total height with support / exhaust stub	1750 / approx. 1900 mm	Proposed
Enclosure differential pressure	-10 to -30 Pa relative to room	Preliminary adjustable target, not a containment acceptance criterion
Filter selection	H13; H14 option for assessment	Proposed; system sizing and integrity testing required

The proposed enclosure gross envelope is 0.768 m³; free-air volume is not established. The extra 300 mm combined depth allows for the control bay outside the glove plane. Interface marks of 400 and 410 mm have different meanings; do not release a seal or clear opening from this table.

The opening is still provisional

The reserved 500 x 410 mm region is not a released clear opening or seal design. Confirm interface bottom height B, door sweep, thermal interfaces, gasket compatibility and maintenance access on the actual unit. The stated envelope does not include all access and operating clearances.

Workflow and containment review

A workflow to test, not a released operating procedure

1. Inspect the assembled system and establish the approved containment conditions before material handling.

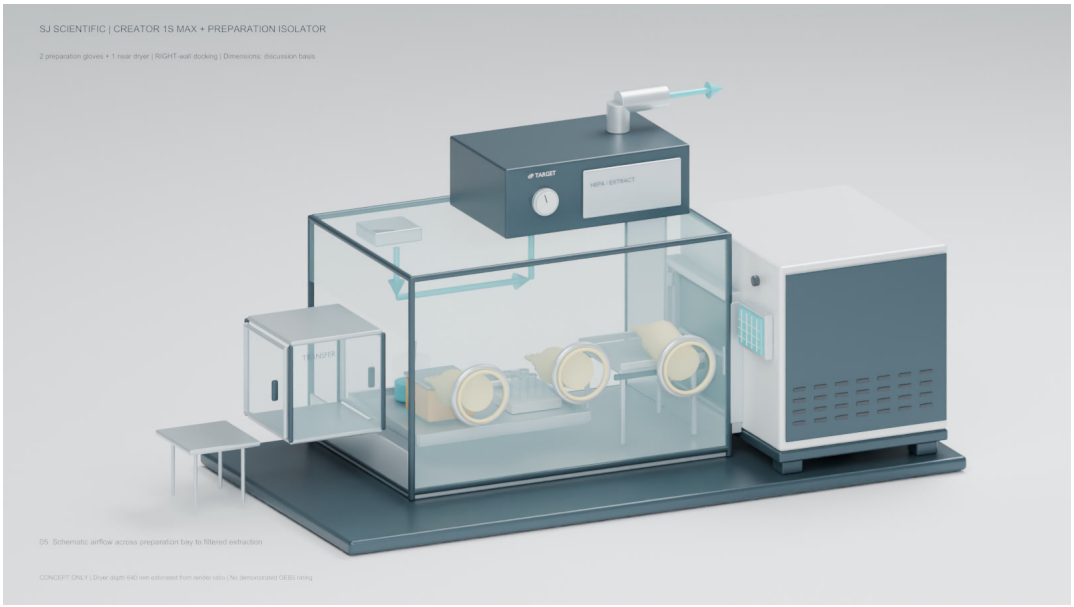
2. Transfer closed materials through the two-door interlocked hatch; review the transfer and cleaning method for the material.

3. Use the left and centre gloves for mixing and manual filling above the removable spill tray. Rendered tools are illustrative, not a supplied automatic dosing line.

4. Support and position the carrier for lateral loading onto the fixed cooled shelf. Confirm closure and latch access with representative vials.

5. Run a formulation-specific freeze-drying cycle. Review chamber vacuum, backfill, pump exhaust, condenser defrost and drains as separate interfaces.

6. Unload and close containers under the required containment conditions, transfer out, then clean and release the system under an approved procedure.



Schematic airflow concept only. The animation is not CFD and does not demonstrate containment or aseptic performance.

Enclosure pressure is not dryer vacuum

The preliminary -10 to -30 Pa target is a room-relative enclosure pressure difference. It is not the lyophilizer chamber vacuum setting and does not establish an OEB5 performance level. Proposed H13 filtration, with H14 considered as an option, requires system design and integrity testing. Airflow arrows in the animation are schematic, not CFD or a measured airflow study.

Containment must cover the whole task, including transfer, spills, filter changes, exhaust and cleaning. A larger enclosure requires fresh fan/filter sizing, airflow and recovery checks; an earlier smaller-box purge time cannot simply be reused. Particulate filtration does not solve solvent-vapor hazards. Flammable solvent service and aseptic filling are not established by this concept.

Questions before specification

Is this an installed or OEB5-qualified isolator?

No. This is a three-glove design concept. The video does not establish delivery, commissioning, exposure performance or OEB5 qualification. The material risk assessment and representative containment testing determine the required evidence.

Can this arrangement be used for peptide preparation?

It is a design starting point for R&D preparation and manual vial handling. Suitability depends on the specific peptide, formulation, exposure limits, solvents and product-protection requirements, not the peptide label alone.

Is the cooled shelf removable?

No. The cooled shelf is fixed in this concept. A removable vial carrier or external support is an option to evaluate; its interface and loading method still need review.

Does a 450-vial reference mean 450 vials can be handled here?

No. The published Creator reference of up to 450 positions assumes 16 mm vial outside diameter. A supported carrier, gloves, edge clearance, fill volume and condenser load may reduce the usable batch. The integrated workflow has not been demonstrated.

Does negative pressure provide sterile filling?

Not by itself. Operator containment and aseptic product protection are distinct requirements. Sterile filling needs a separately specified contamination-control and qualification scope.

Which dimensions can be used for a purchase order?

Only approved project drawings. The table marks product basis, drawing inputs, estimates and proposals separately. Interface height B, seals, service clearances and several handling details remain open.

Project information to provide

Provide the material identity and SDS, occupational exposure target, liquid volumes, vessel and vial drawings, fill volume, preparation tools, cleaning chemicals and site utilities. Engineering review then needs to close interface height B, seals, door clearances, glove reach, load support, electrical and exhaust boundaries, maintenance access and the containment test protocol. Sterile product protection, if required, needs its own design and qualification scope.

Current Creator model reference

Official concept video on YouTube

Official LinkedIn design post

Publication basis: SJ Rev. G engineering concept and current manufacturer model table. No customer identity or private correspondence is reproduced. Final selection, scope and acceptance criteria require project-specific review.