



PIONEERING BIOPHARMA

ADVANCED

FLUID MANAGEMENT & FREEZE-THAW LOGISTICS

WHO WE ARE

Single Use Support provides market-leading process solutions in fluid & cold chain management for the pharmaceutical industry.

Our innovative single-use technologies and services help biomanufacturers increase safety, efficiency and process flexibility by reducing product loss towards 0%.



Company highlights



Sites in Austria & USA
Distributors in APAC & LATAM



> 90 Mio.
EUR turnover per year



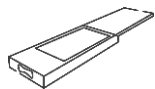
+190
Employees



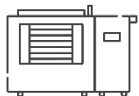
+10,000 m²
Manufacturing capacity



+30
Successful audits



+300.000
RoSS® shells shipped



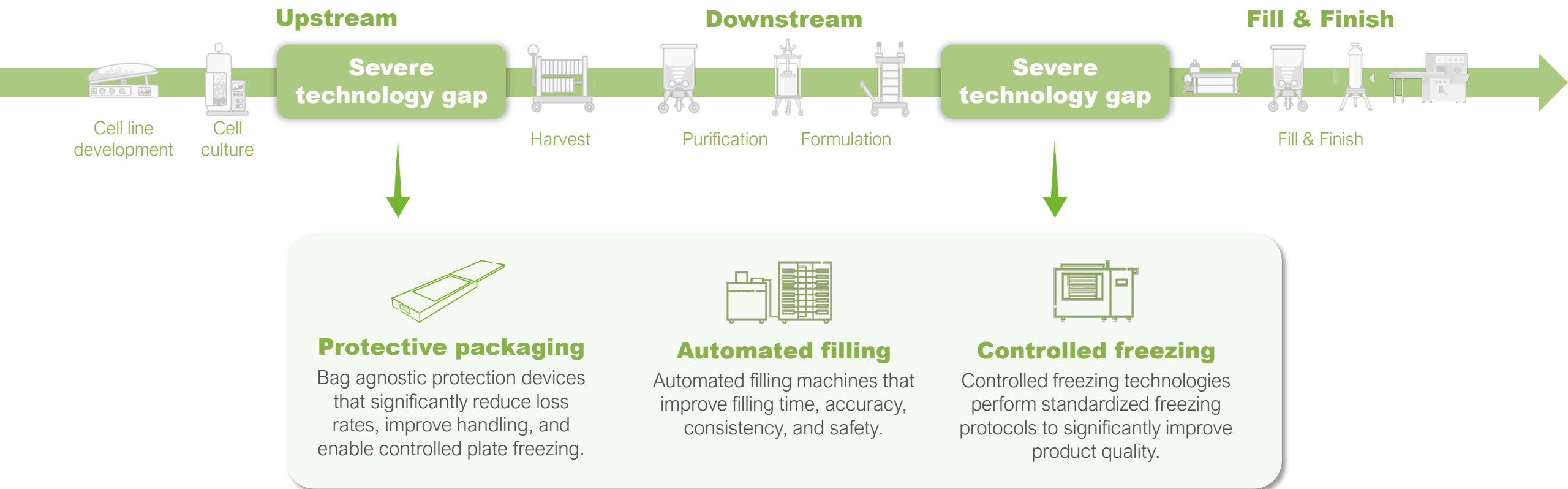
+400
Platforms shipped worldwide

- HQ & MANUFACTURING
- SALES & SERVICE OFFICE
- DISTRIBUTION PARTNERS



We close a critical link between upstream, downstream and fill-finish

SINGLE
USE
SUPPORT. ♥

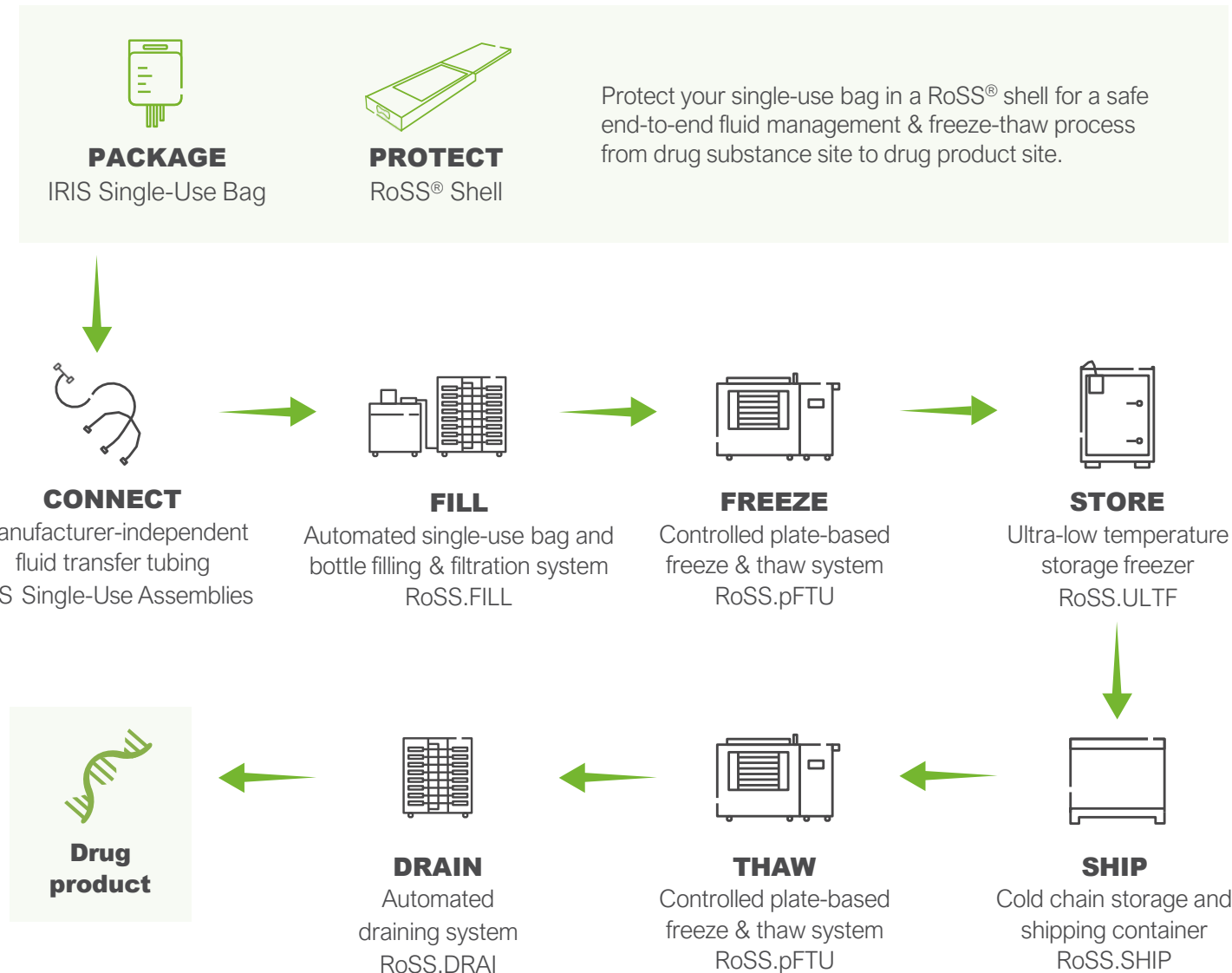


End-to-end fluid management solutions

It is increasingly important to break free from silo thinking and to streamline the manufacturing environment. The risk of product loss is reduced when the entire ecosystem from drug substance to drug product site has been covered by a single provider and the primary packaging is protected throughout its journey.

This is already reflected in the flexible end-to-end process solutions provided by Single Use Support. The solutions enable seamless filling, freezing, shipping, thawing and draining. This approach is crucial to ensure controlled transportation and to avoid incompatibilities or damage.

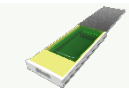
**SINGLE
USE
SUPPORT. ♥**



Value proposition

Single-use consumables & packaging

Bag agnostic transport solutions & sterile consumables to prevent loss of liquids during handling



RoSS® shell
Protective shell



IRIS Single-Use Bag
Packaging



IRIS Single-Use Assemblies



RoSS.SHIP
Shipping



RoSS.RACK
Transport



Bag Independent

All vendors and all bag volumes from 10mL to 50L are supported – pre-equipped with bags available



Product Loss

Significant reduction down to proven <0.001 %



Sustainability

Materials recyclable and multi-use options available



Stainless Steel

Contact surfaces provide direct contact between drug substance and freezer

Fill & filtration / Homogenization

Scalable solution to aliquot fluids of all volumes



RoSS.FILL Bag
(up to 800L)



RoSS.FILL Base
(up to 1000L+)



RoSS.FILL Bottle
(up to 360L)



RoSS.FILL CGT
(up to 72L)



RoSS.FILL Lab Scale
(up to 12L)



RoSS.PADL
Homogenizing solution



Aliquoting even of smallest volumes

Volumes per bag can range from 1mL- 250mL and even up to 50L



Filling accuracy

The smaller the volume, the greater the importance of precision



Specialized features with full process flexibility

Cooling of liquids and automated separation available covering versatile requirements



GMP compliance

Fulfilling Annex 1, Integrating PUPSIT

Freeze & thaw

Scalable solution for freeze, thaw and storage of all fluids.



RoSS.pFTU
Xtra Large Scale
(500L)



RoSS.pFTU
Large Scale
(up to 400L)



RoSS.pFTU
Mid Scale
(up to 100L)



RoSS.pFTU
Lab Scale
(up to 10L)



RoSS.LN2F
Cryogenic freezer



RoSS.BLST
Blast freeze-thaw



RoSS.ULTF
Ultra cold storage



RoSS.SHAK
Shaker



Freezing rates

Controlled-rate freezing for reproducible and scalable freeze-thaw cycles – customized for your process



Process oriented

Various technologies available to adapt to process steps



Product quality

Homogeneous freezing results to prevent cryoconcentration and loss of product quality



Scalability and product viability

Constant freezing rates at all volumes and increased viability due to controlled processes

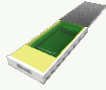
CONSUMABLES

SINGLE
USE
SUPPORT. ♥

PROTECTION

RoSS® Shell

Protection for any single-use bag to ensure 0% product loss



PRIMARY PACKAGING

IRIS Single-Use Bag

Bioprocess containers for the usage from -196°C to +50°C



FLUID TRANSFER TUBING

IRIS Single-Use Assembly

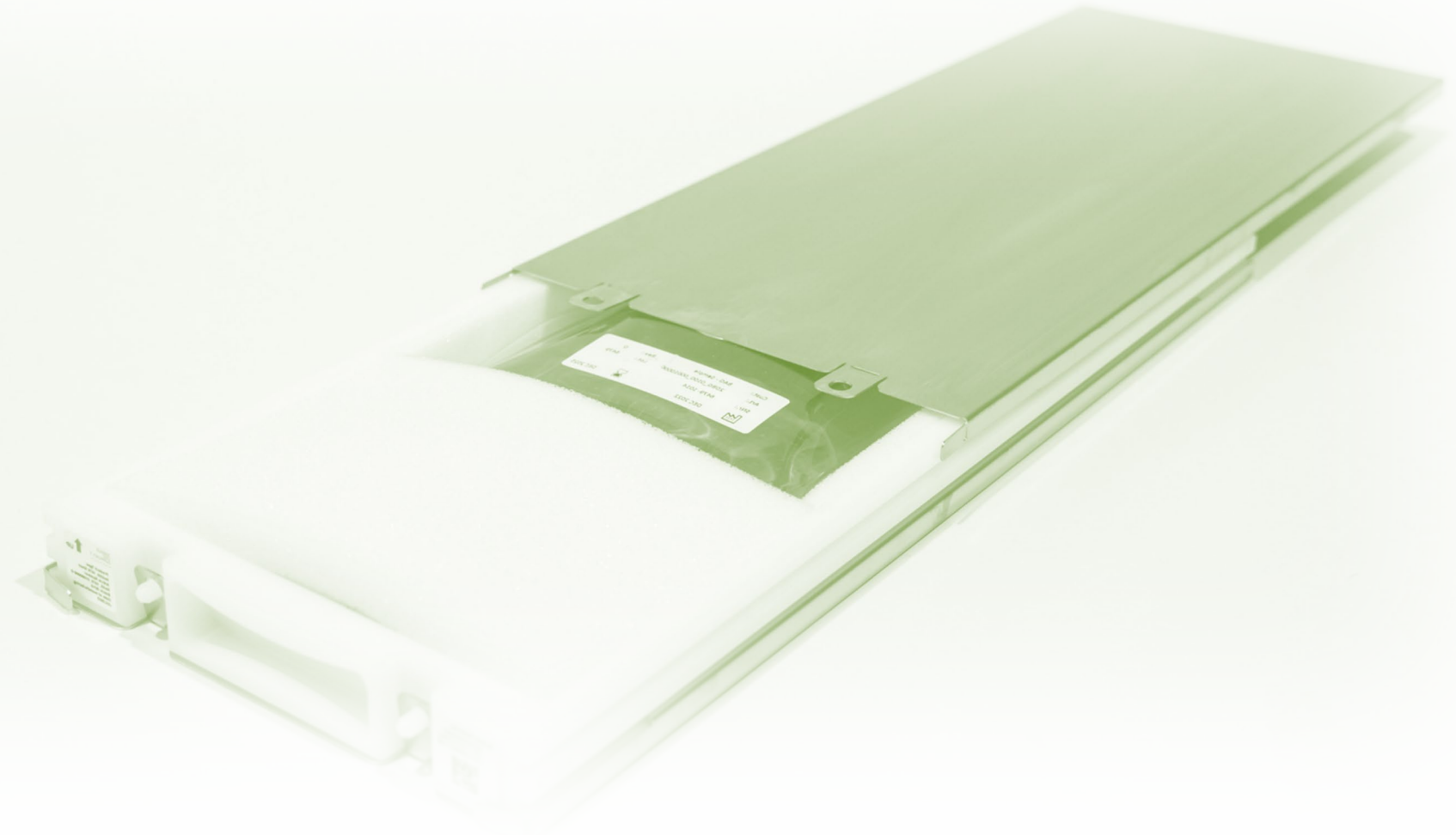
Fluid transfer with manufacturer-independent single-use assemblies



TRANSPORT & SHIPPING

RoSS.SHIP | RoSS.TRLY

Shipping & in-plant movements

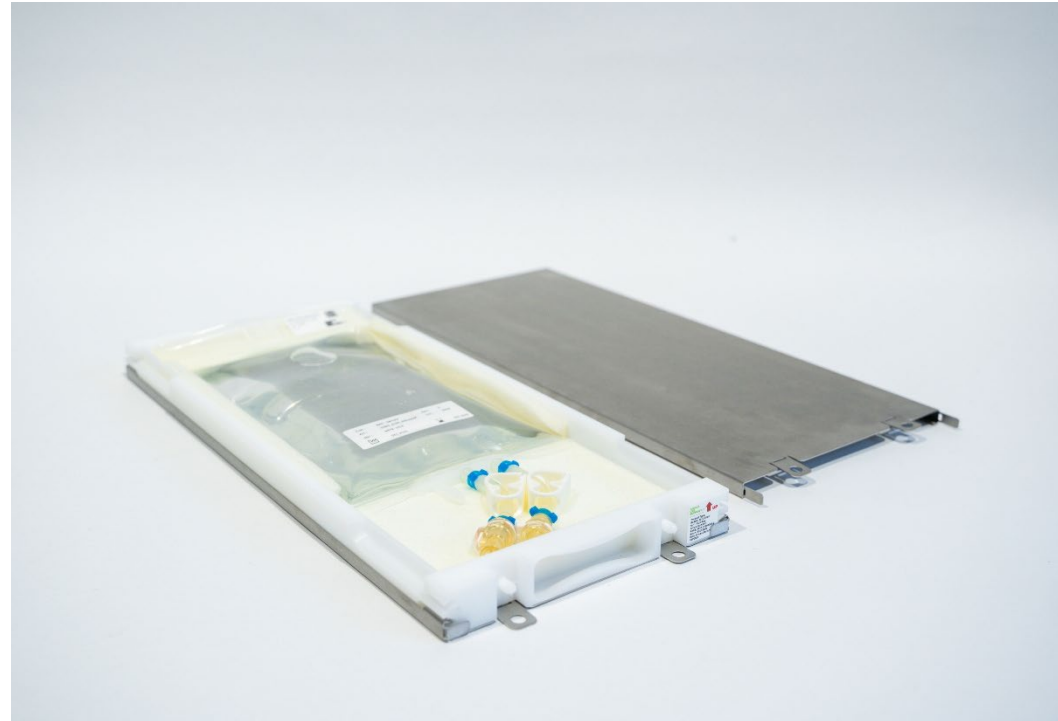


RoSS® Shell

Protecting for single-use bags

The safest transport solution for all available single-use bioprocess containers. Protect your bioprocess container and reduce product loss towards 0 %.

- ♥ Bag independent
- ♥ < 0.001 % product loss
- ♥ Best freezing results



IRIS 2D Bag

Single-use bioprocess container

Primary packaging for your product handling during freezing, storage and transportation.

- ♥ Sizes from 20mL-50L
- ♥ Reliable partner
- ♥ For temperatures down to -196°C (-320°F)



IRIS Single-Use Assemblies

Fluid transfer tubing

Standard and customized single-use assembly based on different tubing modules and aseptic connectors.

- ♥ 100% customizable
- ♥ Dual-sourcing system
- ♥ GMP-compliant



Single-use assembly suppliers

Short abstract of our well-known sub suppliers and partners

Tubing	AdvantaPure (AdvantaFlex, AdvantaSil), Saint Gobain (C-Flex, Sani-Tech), Masterflex, Watson Marlow (Pumpsil), Dupont (Liveo), Venair (Venabio)
Connectors	Nordson Medical (Luer, fittings), CPC Colder (fittings, AseptiQuik, MPC), Eldon James (fittings), Saint Gobain (fittings), Foxx Life Sciences (VersaCap), Sartorius (Opta), Pall (Kleenpak, Presto), Merck (Lynx)
Bags & Bottles	Pall (Allegro), Entegris (Aramus), Castus (Beta Bags), Thermofisher (Labtainer), Foxx Life Sciences (EZBio), Avantor (Pillow Bag), Cytiva (Fortem), Meissner, Millipore (Mobius), Sartorius (Flexbox, Celsius, Flexsafe)
Filters	Pall (Kleenpak, Acro), Merck (Opticap), Sartorius (Sartopore), Masterfilter
Accessories	Saint Gobain (Purefit), Merck (Novaseal, Optima), Oetiker (Clamps), Watson Marlow (Tri-Clamp), Hellermann, Pendotech (Sensors), Bürkle (Clamps), Halkey Roberts (Clamps), NewAge Industries Tri-Clamp, Sartorius (Quickseal)
Single Use Support's products	Fittings, seals, 2D/3D bags



RoSS.SHIP

Cold chain shipping

Single or multi-use cold chain transport container for shipment of frozen drug substances.

- ♥ Trackable & traceable
- ♥ Holding sub zero temperature
- ♥ Compact design

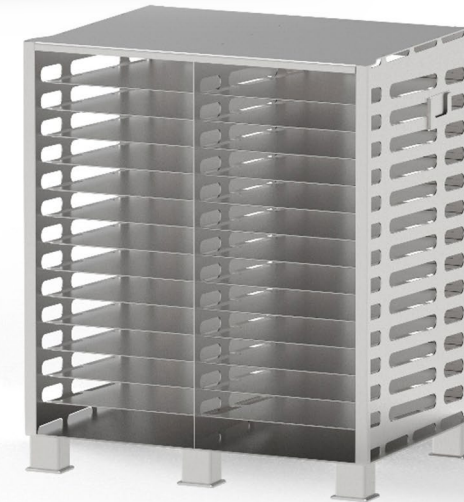


RoSS.TRLY | RoSS.RACK

Transport solutions for shipping &
in-plant movements

Solutions for in-house transport and international
shipping of liquid or frozen substances.

- ♥ Available as single- and multi-use
- ♥ Best suitable for use with RoSS® shells
- ♥ Fully customizable



PLATFORM SYSTEMS

SINGLE
USE
SUPPORT. ♥

HOMOGENIZATION

RoSS.PADL | RoSS.SHAK

Ensuring optimal homogeneity of liquids in single-use bags



FILL & FILTRATION

RoSS.FILL

Automated fill & filtration for single-use bags and bottles



FREEZE & THAW

RoSS.pFTU | RoSS.LN2F | RoSS.BLST | RoSS.ULTF

Scalable solution for freeze, thaw and storage of all fluids



RoSS.PADL

Homogenizing solution

Scalable cooling/heating and massaging platform for optimal homogeneity of liquids.

- ♥ Bag independent
- ♥ Temperature control function
- ♥ Consistent homogeneity



RoSS.SHAK

Shaking & thawing system

Reliable shaker to regain highest quality and homogeneity of your biopharmaceuticals.

- ♥ Product homogeneity
- ♥ Up to 240L per run
- ♥ GMP-compliance



RoSS.FILL

Aseptic filling & filtration

Fully automated fill & filtration system for single-use bags and bottles.

- ♥ Highest accuracy
- ♥ Fast throughput
- ♥ Scalable from 1mL up to 1000L



FROM SCALE UP TO SCALE OUT



FILL LAB SCALE
UP TO 12 BAGS (12L+)



FILL CGT
UP TO 72 BAGS (72L+)



FILL BAG
UP TO 20 BAGS (400L+)



FILL BASE
FOR 2D AND 3D BAGS (1000L+)



FILL BOTTLE
FOR UP TO 160L+

SCALE UP

RoSS.pFTU

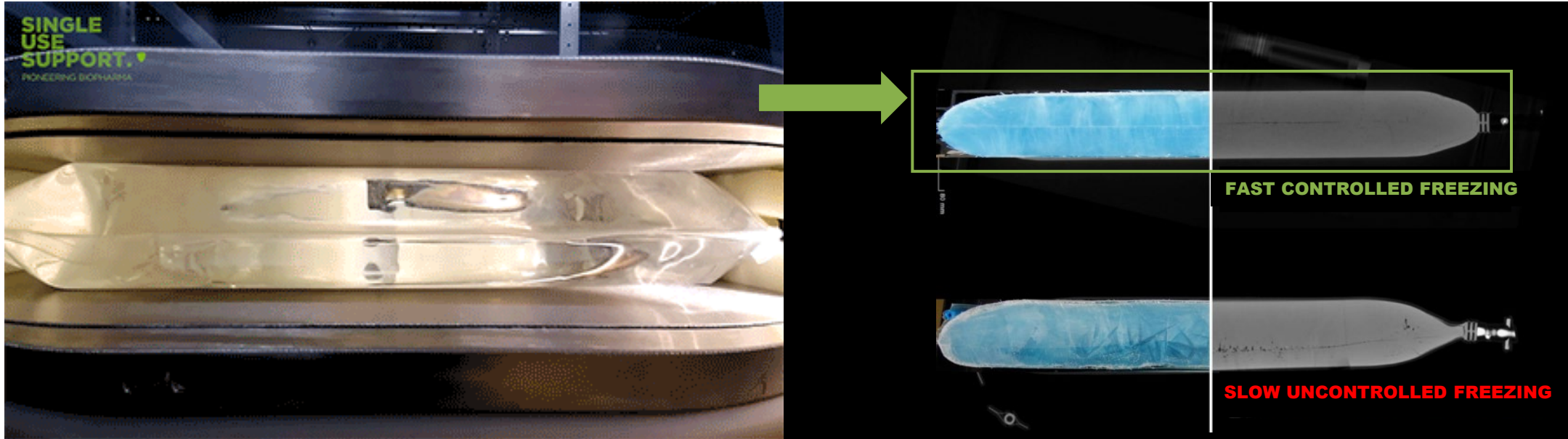
Plate-based freezing & thawing

Plate-based freeze-thaw unit for any single-use bags or bottles.

- ♥ Controlled freezing & thawing down to -80°C/-112°F
- ♥ Suitable for single-use bags & bottles
- ♥ Scalable from 1mL up to 500L



COMPARISON: Controlled vs. conventional freezing



Ice front growth from bottom and top preventing effect of cryoconcentration

Direct cold exposure speeds up freezing
No air between plate and bag

→ **INCREASED PRODUCT VIABILITY**

→ **HOMOGENEOUS FREEZING**

FROM LAB TO COMMERCIAL PRODUCTION



BENCHTOP
UP TO 10L



LAB SCALE
UP TO 10L



MID SCALE
UP TO 100L



LARGE SCALE
UP TO 400L



XL
500L PER BATCH

SCALE UP

RoSS.LN2F

Cryogenic controlled-rate freezer

Cryogenic controlled rate freezer for temperatures down to $-170^{\circ}\text{C}/-274^{\circ}\text{F}$.

- ♥ Fully automated & controlled
- ♥ Increased cell viability
- ♥ Down to $< 250\text{mL}$ / bag



RoSS.BLST

Blast freezing & thawing

Blast freezing and thawing for any primary packaging from all manufacturers.

- ♥ Controlled freezing & thawing down to $-75^{\circ}\text{C}/-103^{\circ}\text{F}$
- ♥ Mobile and customizable internal rack system
- ♥ Capacity of up to 300L



RoSS.ULTF

Ultra-low temperature storage freezer

Ultra-low temperature storage freezer for frozen drug substances in different sizes.

- ♥ Down to -80°C / -112°F
- ♥ Capacity for up to 300L
- ♥ Modular interior



Services

Single Use Support offers valuable services around single-use technologies and systems that enable full service all along the manufacturing of your drug substance.

All inquiries are handled by our global service team with local contact persons in Europe and the US.

QUALIFICATION & VALIDATION

Single Use Support assists you in the whole qualification, validation and documentation procedure.



AFTER-SALES SERVICE

We offer you an initial after-sales service premium package for optimal lifecycle performance.



ENGINEERING SERVICE

Efficient project management, hands-on consultancy and high-speed installation.



FULL SHIPMENT SERVICE

Skip shipment troubles with full shipment service from Single Use Support.



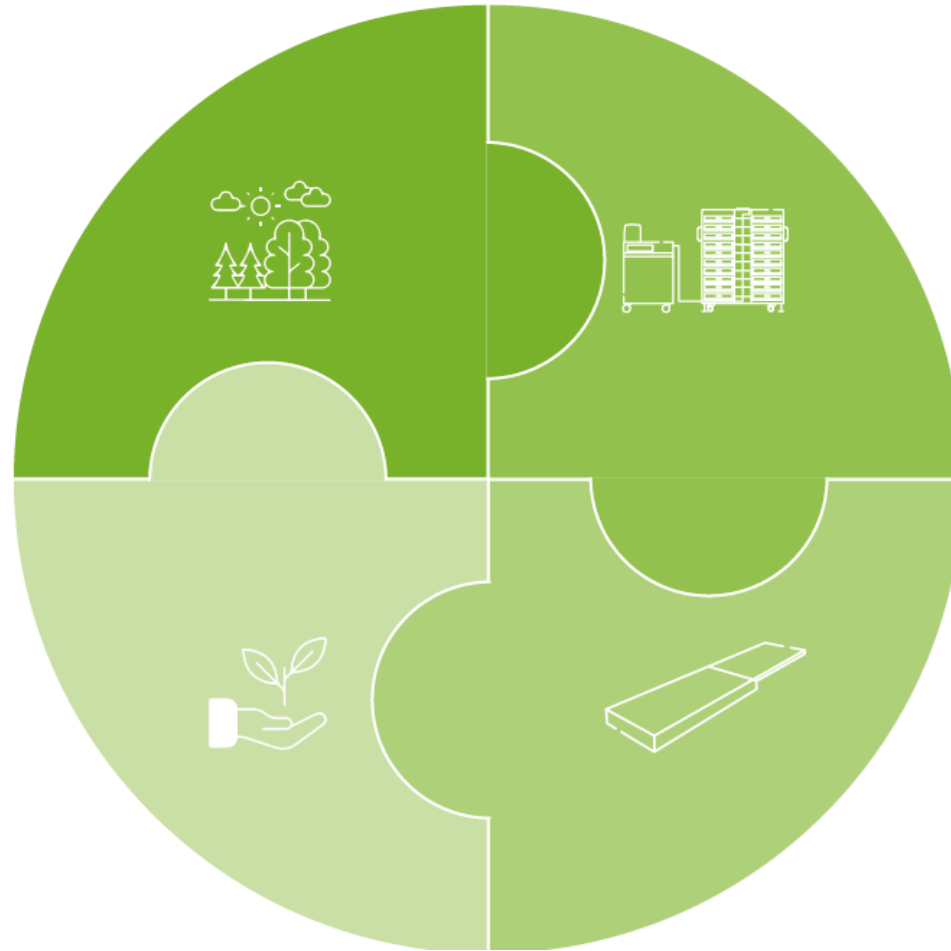
Our commitment to protecting life and the environment

Single Use Support

Heading towards ISO environment certification and climate neutrality as a company.

Responsibility

Recycling and supporting recycling. Reduction of waste.



Single-Use Technologies

Decreased ecological footprint of SUT vs. stainless steel solutions.

Products

Minimal product loss through advanced solutions driving efficient manufacturing processes.

SUSustainability goals

- ♥ Obtain the ISO 14001 certification
 - Environmental compliance and commitment to improvement
- ♥ Achieve the EcoVadis Platinum status
 - Excellence in environment, labor rights, ethics, and sustainable procurement
- ♥ Reduce emissions by 30% by 2028
 - Scope 1: 30% reduction from 155 eq.tCO₂
 - Scope 2: 20% reduction from 85 eq.tCO₂
 - Strategies: Optimize energy use, increase own electricity production

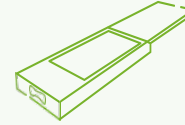


ecovadis

WHAT WE OFFER



Independent solutions



Our innovative solutions are **scalable, customizable** and **agnostic**, providing full flexibility to integrate with any bioprocessing equipment from any vendor.



Efficient processes



We deliver **efficient fluid management and freeze-thaw solutions**, offering complete end-to-end support across the full spectrum of biopharmaceutical and cell and gene therapy processes, **from clinical phases to production.**



Safe and reliable partnership

Lonza



**SCHOTT
PHARMA**

With **over 140 active customers** and more than 30 successful audits, we are a trusted partner, ensuring safety and reliability within the biopharmaceutical industry.

**SINGLE
USE
SUPPORT.** 

PIONEERING BIOPHARMA

**LET'S
WORK
TOGETHER**