

## The STRATOS<sup>®</sup> SL-Series

# Transport Containers for liquid Helium ... light, economical and practical



## STRATOS<sup>®</sup> LHe-Containers



Vaccum super-insulated transport and supply containers for stationary and mobile use. Make use of the many advantages of the STRATOS<sup>®</sup> series for your applications with deeply cold, liquid helium. Easy handling and high safety standards are the marks of this lightweight.

We produce these high-tech containers with lots of experience, technical know-how and highly qualified manufacturing skill

Naturally, the Cryo-containers are type approved according to the international dangerous goods guideline ADR2011 and the European transport equipment directive 2010/35/EU with the  $\pi$  marking.

That the evaporation of gas is used highly efficiently to cool the neck tube, the radiation shield and the insulation adds to the high level of economy of the system.

#### Convincing Option: Highly efficient, electrical pressure build-up control feature

Economical and also space saving solution in the integrated heating system. It enables a regulated pressure buildup for easy extraction of the helium without external He-pressure gas.

 optimized heating evaporates liquid helium and overheats the helium gas in order to achieve good pressure efficiency.



Level Control Device



#### Optional: Integrated, patented LHe decanting siphon with Anti-Oscillation Facility and Filling Connectors

This extraction system is applicable with the STRATOS<sup>®</sup> 250, 380 and 1000SL in order to prevent thermoacoustic vibrations on standstill.

In order to fill the STRATOS® containers or extract from the STRATOS® containers adaptors in various dimensions are available suitable for the consumer.

- easy and safe: no need to install a siphon
- extraction tube remains constantly cold
- no loss of helium when a siphon is installed
- no problem in lower rooms
- low investment costs for siphon due to adapter system for filling into varying consumers
- low siphon wear and tear due to secure and protective storage on the container
- patented anti-oscillation-system ensures low evaporation rates



STRATOS® 1000 SL

#### Advantages that convince:

- efficient He-exhaust gas cooling system
- low evaporation rate (only 0.9 % in STRATOS<sup>®</sup> 100SL)
- optimized super-insulation
- robust transport frame
- compact dimensions
- · safety neck tube
- patented anti-oscillation-system (optional)
- vacuum valve safety facility and integrated safety facility on the security extension.
- smooth running castors
- safety extension with exhaust pressure build-up and evacuation connection
- overflow device which can be shut off (70 mbar)
- various extraction facilities are possible
- easy to set pressure regulator
- transfer pressure of 0-500 mbar
- low maintenance
- wide range of accessories

## So that you have an easy time ...



Beside the function as a transport and supply container the smaller STRATOS<sup>®</sup> can also be used for execution of Cryo-experiments. STRATOS® 250-1000 SL serve to supply liquid helium to MR-tomographs and large cryostats.



protected lifter system

2,5 m flexible transfer tube with protective coating Pressure control valve in safety neck tube Integrated safety facility on security extension Vacuum valve safety facility

Vacuum super insulation: Almost no cold loss with our multilaver vacuum super insulation and exhaust cooled radiation shields

Container Description	100 SL	250 SL	380 SL	1000 SL
Container material	Aluminium	Aluminium	Aluminium	Aluminium
Acceptance marking	$\pi$	$\pi$	π	π
Geometrical content [I]	103	263	380	999
Operating overpressure [bar]	1,5	1,5	1,5	1,5
Weight empty [kg] 1)	56	90	106	300
Weight full [kg] 1)	68	121	151	420
Stat. Evaporation Rate [%/day]	0,9	1,8	1,4	0,5
Total Height [mm]	1.405	1.550	1.900	2.020
Total Width [mm]	700	750	750	1200
Outer Diameter [mm]	700	740	740	1220
Castor Diameter [mm]	100	125	125	160
Neck Diameter [mm]	55	80	80	80
Connections	KF 50	KF 25	KF 25	KF 25
Article Number	794.21109	782.00868	782.00900	782.00904

<sup>1)</sup> The vessels' weight may vary depending on the equipment used!

#### As accessoires to the STRATOS®-containers we offer:

- Anti-Oscillation-Device
- adapter set for MRT-filling • anti-magnetic castors
- integrated decanting siphon level display

#### Cryo-Supply Systems

The vacuum super-insulated containers by Cryotherm serve to store and transport the deeply cold fluid gases. We deliver for you the ideal supply containers for all uses in research, development, medicine and industry - completely equipped and immediately operational. JUNO® LIN-Supply container (25 - 100 )) · APOLLO® LIN-Supply Container (50 - 350 )) SATURN® LIN-Transport Container (100 - 300 ]) · MERKUR® Transport Tank (500 - 2,000 ]) SIRIUS® LIN-Supply Container (1,000 - 2,000 ]) · HELIOS® LHe-Storage Container(100 - 10,000 ])

STRATOS® LHe-Transport Container (100 - 1,000 I)

#### Cryo-Piping Systems

In order to transport deeply cold fluid gases from A to B almost without any loss we have developed special vacuum super-insulated transfer piping. These transfer piping systems are distinguished by high thermal quality. For LIN/LOx/LAr/LHe/LH,

rigid transfer piping (DN 14-100) · flexible transfer piping (DN 20-32) plug-in coupling - weld coupling · gas phase separator (10 I) · phase separator (50 - 200 I)

#### Cryo-Customizing/Cryo-Engineering

If you have completely individual research tasks to perform. Do you have the right partner for the job? Whether you work in micro-electronics or one of the many other areas of research we have the specialist staff who know your field and speak your language.

- elektric pressure build-up
- and lots more

#### Cryo-Storage Systems

Today storage periods of many years are in demand. Make use of our Cryo - Storage Systems for long - term storage of biological, medicinal and chemical materials in laboratories and Cryobanks. BIOSAFE® MD-sample storage system (medical product) (120 -1,400 l) BIOSAFE® SC-sample storage system (120 - 1,400 I) · CHRONOS®-sample container (120 - 1,400 I) STELLA®-work container (0.5 - 63 I) · Freezing apparatus (3.3 - 16 I) · dryo shipper

#### Cooling of Transport Systems

Deep frozen foods cover an ever larger part of our daily requirements. For an optimal cooling quality we equip your cold storage vehicles, trailers, semi-trailers, swap bodies and containers with transportable Cryo-Systems. CRYOGEN®-Trans-System

#### After-Sales-Service

Installation/Assembly, Start Up, Spare Parts Service, Repair/Maintenance, Instruction/Training, Technical Hotline +49 (0)2741 958575

Deeply cold liquid helium

STRATOS® containers are also available in stainless steel. Speak to us.



#### Contact

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