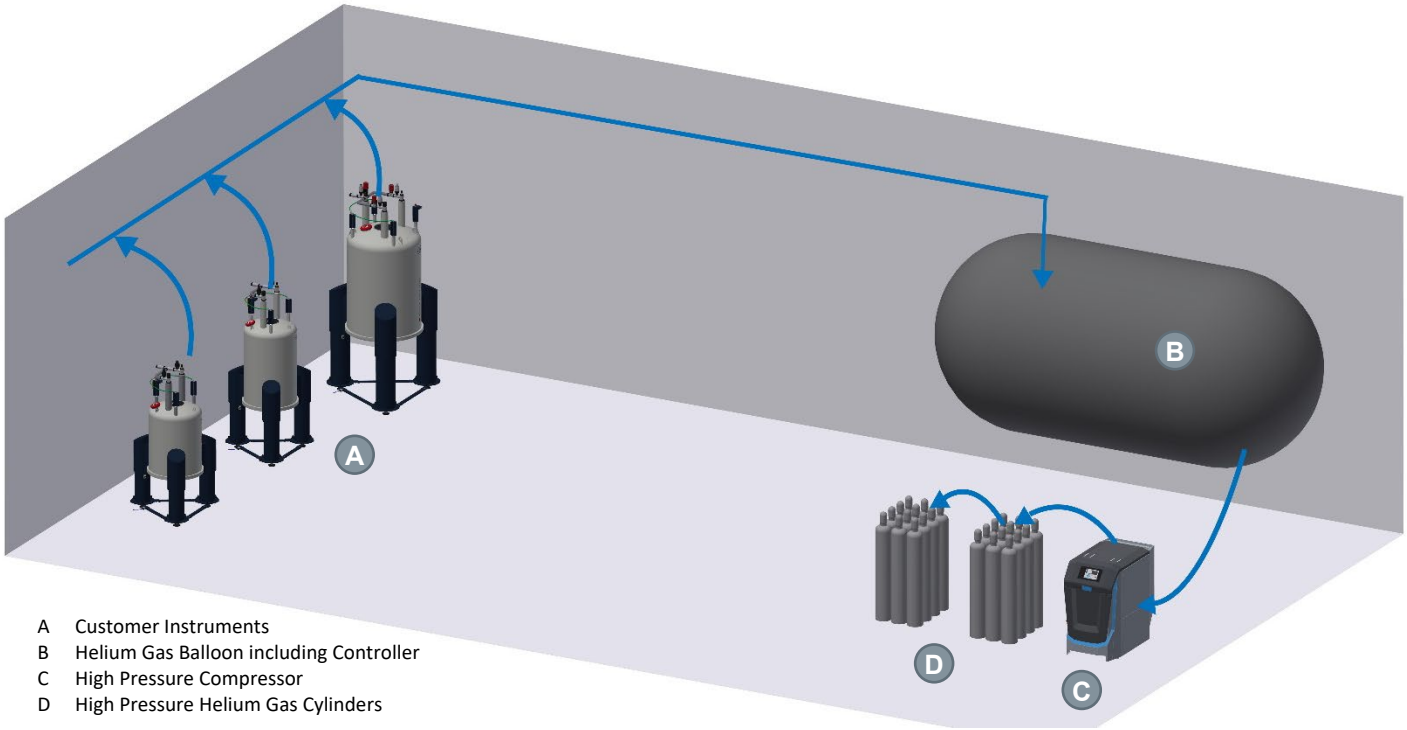
PRODUKT SPECIFICATIONS

Bruker Heliosmart RecoveryPlus System

High Pressure Recovery System with Bauer Compressor



A Customer Instruments
B Helium Gas Balloon including Controller
C High Pressure Compressor
D High Pressure Helium Gas Cylinders

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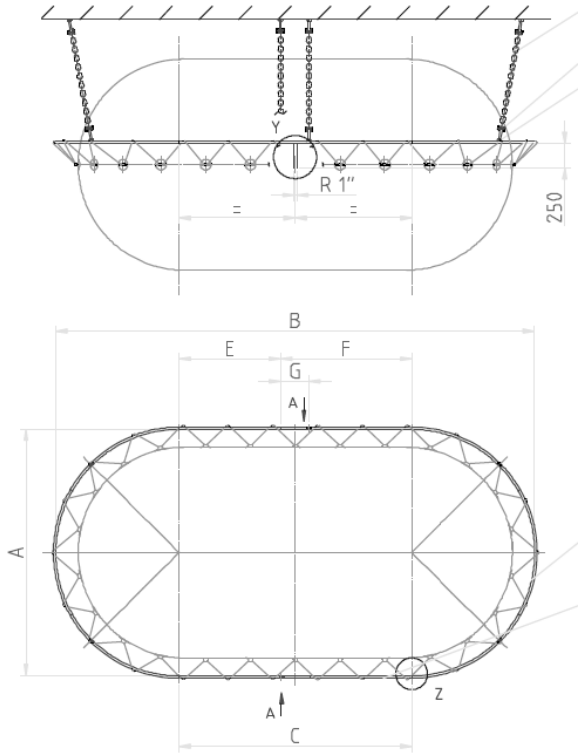
1. Gas Bag for Helium Storage

Volume:	One or two 30 cubic meters balloons depending on operation mode needed.
Dimensions L x W x H:	Needed space for one balloon including supporting frame: 5.9 x 3 x 4 m Standard size of pure balloon about 5.7 m length and 2.8 m in diameter
Level indicator:	Level sensor triggering Bauer compressor
Operating environment:	Indoor and above 4°C recommended If placed outdoor a roof and surrounding walls have to be installed

The balloon can be hooked up by chains



For the 30 cubic meter type 10 chains will be used along the frame to hook it up.
Length of a chain is about 2 meters.

Volume 30m3 / A = 3050mm / B = 5900mm

Balloon can also be set-up on the floor

Full balloon in background / empty balloon in the front

2. High pressure Compressor

G120-5.5-MV (VECH120) Bauer (air cooled)

System Dimensions:	104 x 76 x 133 cm (L x W x H) without condensate vessel
Weight:	555kg
Typical Power Consumption:	5.5kW 400V/3 Phase 50Hz version Europe
	5.5kW 460V/3 Phase 60Hz version US (VECH120)
Operating environment:	Indoor, Temperature range min. +5°C / max. +45°C
Working pressure:	90-220bar
Pressurization rate:	140 liters per minute of atmospheric helium gas
Sound proofing to:	67 ± 2 db(A)

For servicing reasons at least 50cm free space around is needed.
At least **3 square meters** should be available for the high-pressure compressor.

BAUER G120-5.5-MV compressor

3. High pressure storage

Dimensions per rack:	120 x 80 x 180 cm (L x W x H)
Weight:	812kg
Configuration:	12 times 50 liters cylinders on a rack
Working pressure:	200bar / 3000psi
Storage capacity per rack:	160 liters liquid helium equivalent
Amount of rack:	Specified according to site needs, operation mode and storage capacity
Operating environment:	Outdoor or Indoor, Temperature range min. -20°C / max. +50°C
Housing:	Steel frame, integrated manometer and stainless-steel piping

4. **Houses**

Magnet to collection line

- For standard operation boil-off, DN10 plastic tubing to back pressure controller (option to be ordered separately) and DN10 further to collection line manifold, Bruker type connections
- For magnet helium refill operation, 5 meter DN25 (1”) bellows to collection line manifold, KF25 connections

Collection line to helium balloon

- DN50 (2”) flexline (bellows braided) with overpressure safety valve, KF50 connections
  Outer diameter 75mm
- Available length: 3, 10, 20 meters

Helium balloon to high pressure compressor

- DN25 (1”) flexline (bellows braided), KF25 connections
  Outer diameter 40mm
- Available length: 3, 10, 20 meters

High pressure compressor to high pressure storage

- High pressure flexlines DN16 (bellows braided and plastic coated), high pressure Parker QD’s
  Outer diameter 40 mm
- Available length: 10 meters and 10 meters extension line