HELIOX TRANSFER SYSTEM
MAYAAH

SPECIFICATION:

CONTAINER

Heliox Gas Transfer System

The system is housed in an offshore container certified to DNV 2.7-1 / BS EN 12079 / ISO 10855. It features a high-capacity Heliox transfer compressor designed for continuous 24-hour operation, achieving an exceptional transfer rate of 400 m³/hr (≈6,666 L/min) — performance unmatched by conventional systems.

The container is divided into two sections:

- One housing the main pump, buffer tank, and cooling system.
- The other section serves as a climate-controlled control room housing the gas management panel and a VFD-based B-Control system.

The B-Control interface enables precise electronic adjustment of pressure and flow, real-time monitoring of charging rates, transfer speed, and completion status.

Cooling is achieved via a freshwater/glycol circulation loop with a radiator for heat dissipation, or optionally, through a seawater-to-glycol heat exchanger.

Supplied with a full operations manual, schematics, and flowline layout.
Exclusion: Supply and charging hoses.

COMPRESSOR

Model: GIB 26.10-132

Capacity

- [l/min]: 6666
- [cfm]: 235
- [m³/hour]: 400

Inlet Pressure

- [bar]: 3

Operating Pressure

- max [bar]: 350

Motor

- [kW]: 132

Power consumption

- [kW]: 99

GIB 26.10 Series compressor systems are extremely low-maintenance with long service life, yet are significantly quieter than comparable air-cooled compressors. They are specifically designed for continuous industrial operation or heavy-duty applications. The total cost of ownership (TCO) is further reduced by their low oil consumption, long maintenance intervals and transparent maintenance rates. The dry sump lubrication system enables the compressors to be set up at angles of up to 30° in all directions.

BUFFER VESSEL

Ensures a continuous gas flow to the compressor to maintain operation

Model: GIB26.x

Volume

- 1 × 750 Litre

Working pressure max

- 16 bar

connection gas outlet (flange)

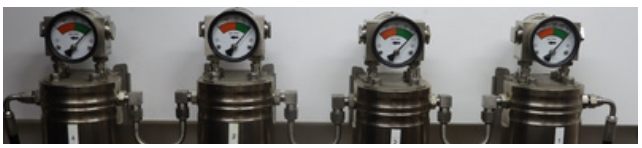
- DN80, PN16 EN1092-1

Diameter approx.

- 800 mm

Height (incl. safety valve) approx.

- 1971 mm



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HELIOX MANAGEMENT PANEL

Input
- 4 x Input (From source quads)

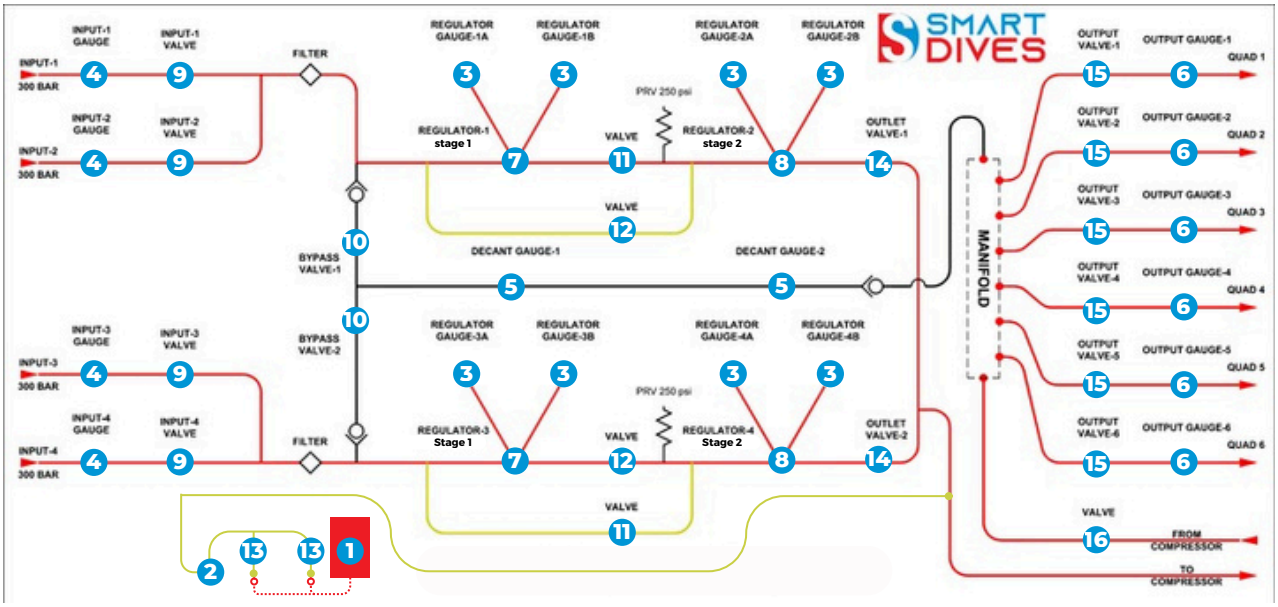
Output
- 6 x output to quad (from compressor)

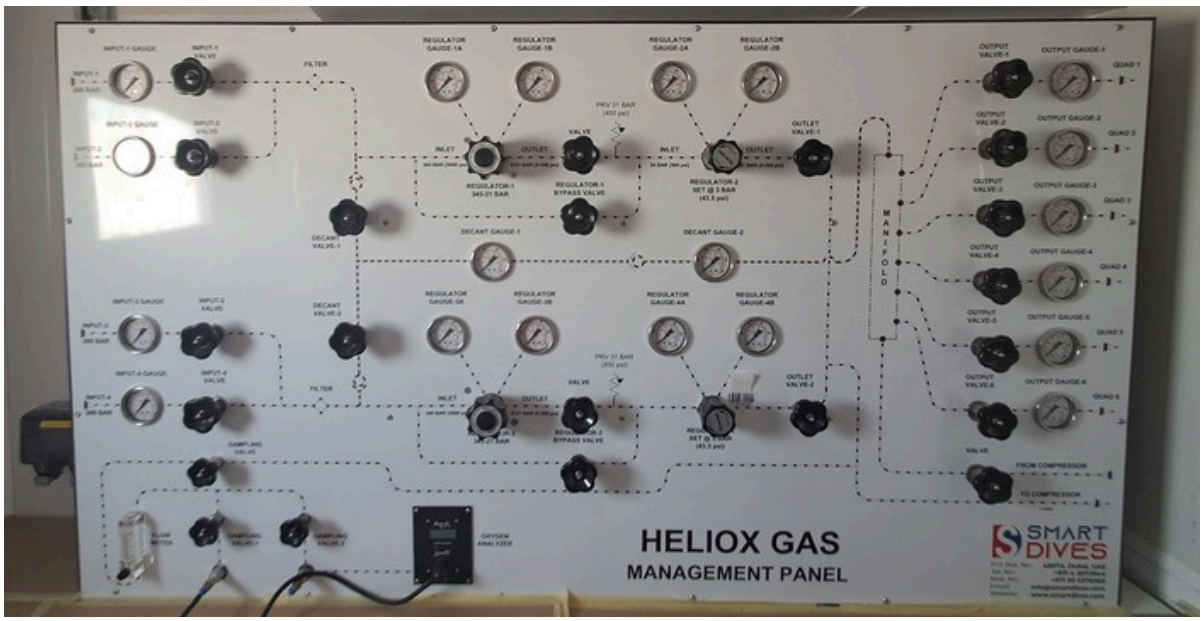
Sampling

1. 1 x Oxygen Analyzer (O2) with high low alarm
2. 1 x Analyzer Flow Meter

Gauges
- 20 x Gauges
  3. 8 x regulator gauges
  4. 4 x input gauges
  5. 2 x decant gauges
  6. 6 output gauges

Regulators and valves
- 4 x Regulator (Amron)
  7. Regulator 1 & 3: Stage 1
  8. Regulator 2 & 4: Stage 2
- 22 x control valve
  9. 4 x input valve
  10. 2 x decant valve
  11. 2 x intermediary valve between regulators
  12. 2 x bypass valve
  13. 3 x sampling valve
  14. 2 x outlet valve
  15. 6 x output valve
  16. 1 x from compressor





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EXTERNAL COOLING / RADIATOR-SET / SEA WATER COOLING

Cooling medium (radiator set)
- Ambient air

Cooling medium (compressor)
- Water with up to 45 % Glycol

Cooling water pressure
- Max. 10 bar

Cooling water flow
- 10 m³/h

Cooling power radiator set approx.
- 92 kW

Water connection radiator set
- R1 ½ “

Cooling Flexibility for every environment.

The SmartDives Heliox Gas Transfer System features a dual-mode cooling design that ensures optimum compressor performance in any operating environment. Depending on the installation, the system can function in either seawater cooling or radiator cooling mode.

IN seawater cooling mode, heat from the closed glycol-water circuit is exchanged through an external seawater heat exchanger, making it ideal for offshore and marine operations. This setup delivers consistent cooling efficiency using the vessel’s available seawater flow.

For onshore or standalone applications, the system seamlessly switches to radiator (air) cooling, where a built-in air-cooled radiator and fans maintain stable temperatures without external connections.

With a simple selector valve, operators can switch between modes instantly, ensuring continuous operation, energy efficiency, and maximum uptime - wherever the system is deployed.

VARIABLE-FREQUENCY DRIVE

The Smartdives Heliox Container incorporates a VFD, an intelligent control devices that ensure efficient operation of the container’s electrics.

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