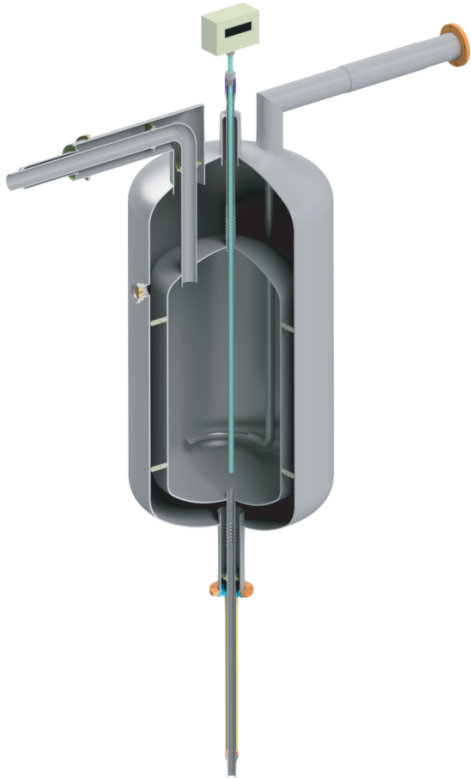


PHASE SEPARATOR

VACUUM INSULATED



APPLICATION

The phase separator is used in piping with cryogenic liquids, such as nitrogen, oxygen and argon.

Its function is to separate the working medium in the gas phase from the medium in the liquid phase.

The device is used where large amount of cryogenic medium in the gas phase is produced (evaporation caused by friction loss and inflow of heat from piping and other devices).

The phase separator is an integral part of a system for supplying liquid gases in applications where the supply of a homogeneous liquid is necessary.

DESIGN AND BENEFITS

Special design of the internal tank, which is covered with sufficient number of MLI layers. The use of insulation makes it possible to avoid the inflow of heat through radiation.

The internal tank is equipped with a liquid level sensor and pressure indicator working together with the fill and vent valves. The system allows safe self-control of the level of liquid and fast reaction to a sudden increase in the value of pressure in the tank.

The external tank, which is a vacuum jacket, remains at the ambient temperature, providing excellent protection against cold burns.

High vacuum in the space between the tanks eliminates the inflow of heat by convection.

The device may have one or more liquid reception stub pipes.

The device allows lowering the value of working pressure from the high value of pressure in the tank.

The phase separator ensures constant supply of liquid to the reception devices.

The device is designed to work in high hygiene areas.

PHASE SEPARATOR

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TECHNICAL SPECIFICATION

TECHNICAL DATA



Installation:	inside/outside
Orientation:	vertical tank
Internal tank volume:	40 litres of liquid*
Coupling:	Johnston bayonet coupling (KrioSystem's design)
Capacity:	1600 l/h*
Filling:	valve with open/close function
Pressure class:	PN16*
Inlet pressure:	max 12 bar*
Outlet pressure:	less than 12 bar*
Valve control pressure:	4–6 bar
Liquid level sensor:	yes (KrioSystem's design)
Pressure gauge:	manometer
Safety devices:	safety valve
Power supply voltage:	230 V AC

* - standard value - other available on individual request

MATERIALS



Internal tank	stainless steel 1.4307
External tank	stainless steel 1.4307
Insulation	MLI + vacuum
Spacers	G10 epoxy glass
Brackets	stainless steel

MANUFACTURE



Pipes and materials according to EN standards.

PED 2014/68/EU directive conformity.

Welding processes according to ISO 3834-2 quality management system.

Maximum permissible leak: $1 \cdot 10^{-9}$ mbar · l/s verified with a helium leak detector acc. with PN-EN ISO 20485.

Vacuum level $\leq 10^{-4}$ mbar

OPTIONS



Separator design adapted to the needs and working conditions of the customer.

Built for other pressures.

Different types of materials.

Different lengths and shapes of couplings.

Separators with/without required fittings, e.g. shut-off/control/safety valves available.

Easy vacuum regeneration.