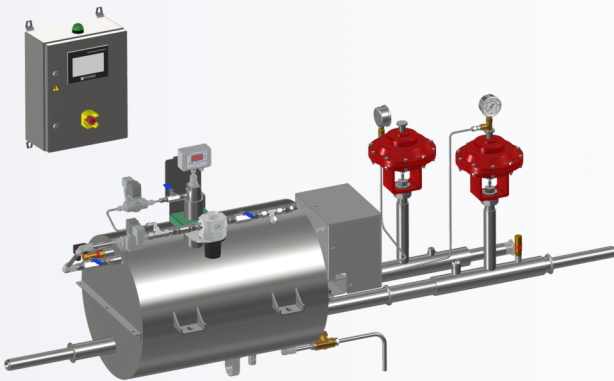


# Phase Separator

*Horizontal*

Pressure Adjustable



Stainless steel, over-head horizontal type vacuum jacketed cryogenic conditioning system designed to store LN<sub>2</sub> at user required pressure setting. Once the system has been set up, the liquid level and pressure is automatically control by the controller. The controller comes with a HMI to allow user to set their required pressure.

## Horizontal Phase Separator - Pressure Adjustable

Pressure adjustable horizontal Phase Separator is used for stepping down the pressure of liquid nitrogen in the pipeline. This is done by venting out excessive vapor while maintaining a constant liquid supply capacity for downstream consumption. The result is a high quality liquid nitrogen with precise pressure control at the user's point of use. CSM Phase Separator is a vacuum insulated reservoir holding tank for liquid nitrogen with a pressure & level control system. The controller will operate its inlet proportional control valves to regulate the liquid level, and another vent proportional valve to regulate the user's required set pressure.

## Typical Applications

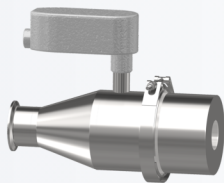
- Test Handlers in semiconductor IC Assembly and Test
- Environmental Chambers
- Bottling Lines and Packaging
- Food Freezing

## Features and Benefits

- Consistent liquid nitrogen delivery, dramatically improving process control and efficiency
- User friendly operator controls with level & pressure alarm
- Vacuum jacketed vessel for frost-free operation
- User adjustable output pressure for all models
- HMI with digital display of liquid level and pressure readings
- Modbus output available

All Phase Separators comes with CSM renowned customer service, from conceptual design to implementation, and are backed by a 5-years Vacuum Warranty, & 1-year Defect Warranty.

## Related Products:



Vent Heater

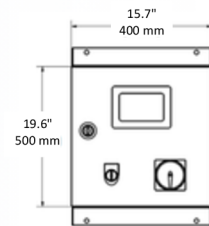
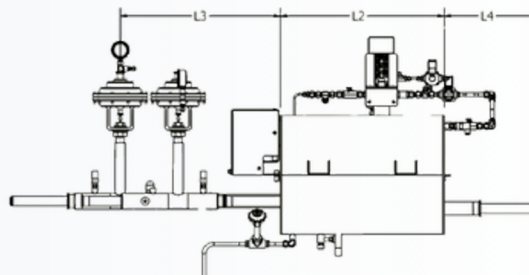
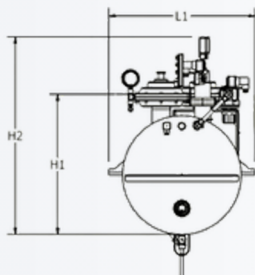
# Phase Separator Specifications

Model	C22P	C48P	C76P
<b>Operational Capacity <sup>[1]</sup> / Full Capacity</b>	6 gal (22 L) 10 gal (36 L)	12.6 gal (48 L) 20 gal (76 L)	20 gal (76 L) 32 gal (120 L)
<b>Outlets (Horizontal)</b>	1 (C10)	2 (C10)	1 (B20)
<b>Max. Inlet Pressure Max. Back Pressure</b>	145 psi (10 bar) 87 psi (6 bar)	145 psi (10 bar) 87 psi (6 bar)	145 psi (10 bar) 87 psi (6 bar)
<b>Vessel MAWP</b>	150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)
<b>Max. Withdrawal Rate</b>	5 GPM (19 LPM)	28 GPM (106 LPM)	40 GPM (150 LPM)
<b>Weight - Empty - Full</b>	220.5 lbs (100 kg) 286.6 lbs (130 kg)	264.5 lbs (120 kg) 401.2 lbs (182 kg)	374.8 lbs (170 kg) 595.2 lbs (270 kg)
<b>Level Control Sensor</b>	Capacitance		
<b>Vacuum Insulation</b>	Static Vacuum only		
<b>System Utilities</b>	Electricity: 80-240 VAC; GN2: 40-140 psi (2.7- 9.7 bar)		
<b>Materials</b>	NEMA 4X, CE		
<b>PLC Platform</b>	Siemens S7-1200		
<b>HMI (LCD touchscreen)</b>	7.0" Color		
<b>Standard Testing</b>	Dimensional Check He Leak Checked @ $1 \times 10^{-9}$ cc/s		
<b>Optional</b>	Pneumatic Pressure Test, Vacuum Retention Testing, LN2 Cold Shock Testing, CFOS Cleaning for O2 Services, X-ray Inspection, Pre-Material Certs., ASME-coded Pressure Vessels BPVC Section VIII Certification		

<sup>[1]</sup> Factory preset operational capacity, field adjustable by user depending on liquid flow output requirement, and in-coming liquid saturation characteristics

# Phase Separator Dimensions

Model	H1	H2	L1	L2	L3	L4
<b>C22P</b>	21.3" (540 mm)	30.0" (760 mm)	22.2" (565 mm)	24.8" (630 mm)	24.4" (620 mm)	14.2" (360 mm)
<b>C48P</b>	26.8" (680 mm)	33.5" (850 mm)	25.4" (646 mm)	33.7" (855 mm)	30.0" (760 mm)	14.2" (360 mm)
<b>C76P</b>	33.5" (850 mm)	37.4" (950 mm)	25.8" (655 mm)	43.3" (1100 mm)	29.1" (950 mm)	22.5" (572 mm)



All dimensions provided are for indication purposes only and may not accurately represent the actual product dimensions. Please contact us for updated and actual measurements.