

# Phase Separator

## Pressure Adjustable

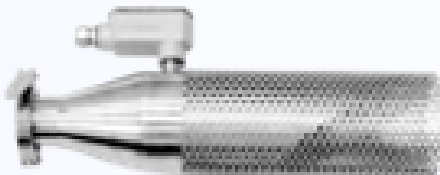
Stainless steel, over-head horizontal type vacuum jacketed cryogenic conditioning system designed to store LN<sub>2</sub> at user required pressure setting. Once the system has been set up, the liquid Level and pressure is automatically control by the controller. The controller comes with a HMI to allow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

### Phase Separator - Pressure Adjustable

Pressure adjustable 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.

All Phase Separators comes with CSM renowned customer service, from conceptual design to implementation, and are backed by a 5-year warranty

### Related Products:



Vent Heater

### Typical Applications

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

### 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

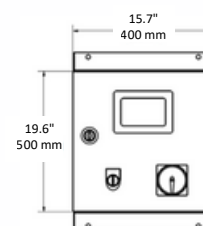
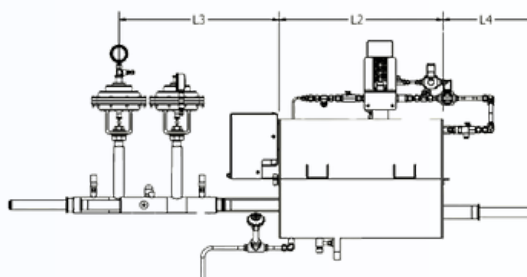
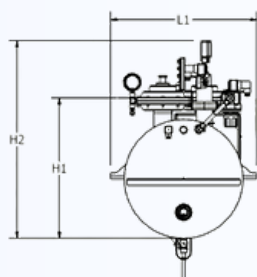
# Phase Separator Specifications

Model	C22P	C48P	C76P
Operational Capacity* / Full Capacity	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)
Outlets (Horizontal)	1 (C10)	2 (C10)	1 (B20)
Max. Inlet Pressure Max. Back Pressure	145 psi (10 bar) 87 psi (6 bar)	145 psi (10 bar) 87 psi (6 bar)	145 psi (10 bar) 87 psi (6 bar)
Vessel MAWP	150 psi (10.3 bar)	150 psi (10.3 bar)	150 psi (10.3 bar)
Max. Withdrawal Rate	5 GPM (19 LPM)	28 GPM (106 LPM)	40 GPM (150 LPM)
Weight - Empty - Full	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)
Level Control Sensor	Capacitance		
Vacuum Insulation	Static Vacuum only		
System Utilities	Electricity: 80-240 VAC; GN2: 40-140 psi (2.7- 9.7 bar)		
Materials	NEMA 4X, CE		
PLC Platform	Siemens S7-1200		
HMI (LCD touchscreen)	7.0" Color		
Standard Testing	Dimensional Check He Leak Checked @ $1 \times 10^{-9}$ cc/s		
Optional	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		

\* 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
C22P	21.3" (540 mm)	30.0" (760 mm)	22.2" (565 mm)	24.8" (630 mm)	24.4" (620 mm)	14.2" (360 mm)
C48P	26.8" (680 mm)	33.5" (850 mm)	25.4" (646 mm)	33.7" (855 mm)	30.0" (760 mm)	14.2" (360 mm)
C76P	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.