Phase Separators - PS Series

Liquid Nitrogen at the Pressure and Temperature You Need

Technifab's Phase Separators deliver high quality, low temperature, saturated, pure liquid nitrogen at consistent, adjustable pressures.

We offer four phase separator models: the PS-22, PS-42, PS-67, and the PS-1.

Benefits

With a liquid level probe and Programmable Logic Controller (PLC), the PS series of liquid nitrogen phase separators provides you with:

- Consistent liquid nitrogen delivery, dramatically improving process control and efficiency.
- Easily adjustable output pressure for all back pressure models.
- User friendly operator controls.
- Vacuum-jacketed vessel for virtually frost-free operation.

Typical Applications

High quality liquid nitrogen applications including:

- Scientific Instruments
- Environmental Chambers
- High Volume Industrial Applications
- Food Freezing.
- MBE
- LN2 Injection

PS-67

Vertical Outlet PS-22 without the Backpressure Option.

Phase Separators are often used in liquid nitrogen applications for precise temperature control at the end use point. They are also used to provide consistent liquid supply in various applications.

Models to Meet Your Needs

For lower cryogenic flow and when overhead mounting is desired, use the PS-22 or PS-42. They feature a compact size, vertical and horizontal outlet configurations, and a gravity feed/ naturally aspirated version.

An optional Inlet Modulating Valve is available for even closer pressure control.

For higher flow rates and when floor or tank pad mounting is desirable, consider the PS-67.

The PS-1 is ideal for low liquid nitrogen flow operations, like our liquid nitrogen injector the Techinjector, that use lower pressures.

PS-1, Our Latest Model

LT-34096(16)

Options include a vent heater (PS-22/PS-42 only) and an external alarm for out of condition notification.

Technifab manufactures and installs vacuum jacketed pipe, transfer hoses, dewars, valves, and other cryogenic equipment. We also provide the industry leading warranty and service to back it up.

PS-22/42/67 Control Box

Specifications - ASME Units Available

	PS-22	PS-42	PS-67	PS-1[1]
Number of Liquid Outlets	1, 2 or 4	6 or 8	1	1
Maximum Inlet Pressure	150 psig (10 bar)	150 psig (10 bar)	150 psig (10 bar)	150 psig (10 bar)
Continuous Flow Rate	3.3 gallons/minute (12.5 liters/minute)	9.9 gallons/minute (37.5 liters/minute)	30.5 gallons/minute (115.5 liters/minute)	.5 gallons/minute (1.8 liters/minute)
Maximum Withdrawal Rate[2]	29 gallons/minute (110 liters/minute)	220 gallons/minute (830 liters/minute)	220 gallons/minute (830 liters/minute)	.5 gallons/minute (1.8 liters/minute)
Working Liquid Capacity	2.6 gallons (9.8 liters)	7.2 gallons (27.2 liters)	15.3 gallons (57.9 liters)	.27 Gallons (1 liter)
Dimensions, Vessel (w/o valves & probe)	33.4"l x 22"w x 34"h (84.8 cm x 56cm x 86cm)[3]	47"l x 22"w x 23.5"h (135cm x 56cm x 86cm)[3]	102"h x 32"w x15"d (259cm x 81cm x 38cm)	6"d x 9.8"w x 31.3"h (15cm x 30cm x 86cm)
Vessel Assembly Weight (empty)	135 lbs (61 kg)	215 lbs (97.5 kg)	270 lbs (122 kg)	27 lbs (12 kg)
Vessel Assembly Weight (full)	177 lbs (80.28 kg)	346 lbs (156.9 kg)	418 lbs (189.6 kg)	30 lbs (13.6 kg)

[1]No backpressure, output pressure is 1 psig (70 mbar) maximum.

[2]Assumes LN_2 at $-320^{\circ}F$, saturated, and 1 atmosphere with a 5 psi pressure drop.

[3]With the vertical outlet option. For the horizontal outlet, dimensions are 46"l x 22"w x 27"h (117cm x 56cm x 86cm).

Control Box

Power Input	110-240 VAC, 50-60 Hz	
Power Usage	200 watts (Based on Power Supply)	40 watts (Based on Power Supply)
Dimensions	12"h x 12"w x 6"d (31cm x 31cm x 15cm)	10"h x 10"w x 6"d (25cm x 25cm x 15cm)
Ethernet Capable	Yes	No

Stainless Steel Control Box

Temperature range from 32°F - 120°F (0°C - 49°C).   Nema 4X and IP65 certification.

Satisfying customers since 1992 because, *We Know Cryo…*®

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