

Reliable liquid nitrogen supply

StirLIN

The stand-alone StirLIN plants are truly performance plus technology. Featuring high energy efficiency, high productivity, controlled operation, low maintenance and only a 10 minute start-up time. They are the only way to make your liquid nitrogen production self sufficient and highly reliable.



Where you need it, when you need it



The Stirling liquid nitrogen plants produce at least 5 (StirLIN-1 Economy) up to 89 (StirLIN-8) usable liters per hour of liquid nitrogen of 99% or better purity at nominal operating conditions. The pressure in the storage vessel can be set from 0.3 to 5 bar(g), increasing the liquid nitrogen production to 16.5 l/h (StirLIN-1) up to 151 l/h (StirLIN-8) at a purity of 98% or better. The liquid nitrogen is dispensed through a flexible hose by opening a valve. The power consumption is 13 kW (StirLIN-1 Economy including chiller) up to 120 kW (StirLIN-8) if tap water is used. Operators only need to replace filters and compressor oil (if applicable) and perform routine checks between maintenance intervals, which is 6,000 operating hours. The StirLIN-1 and StirLIN-4 are also available in an Extendible version. By adding a second cryogenerator, they become a StirLIN-2 and a StirLIN-8 respectively. With only one cryogenerator the purity is better than 99.5 %.

StirLIN-1 Economy



StirLIN-1 Compact



StirLIN-1



StirLIN-2



StirLIN-4



StirLIN-8

	StirLIN-1 Economy	StirLIN-1 Compact	StirLIN-1	StirLIN-2	StirLIN-4	StirLIN-8
SPECIFICATIONS						
Liquid nitrogen production (l/h) at nominal operating conditions						
0 bar(g) purity 99% nitrogen + inerts (usable liters) (Extendible 99.7%)	5	10	10	21	44	89
1 bar(g) purity 99% nitrogen + inerts (Extendible 99.7%)	5.7	11.5	11.5	23	48	97
3 bar(g) purity 98% nitrogen + inerts (Extendible 99.5%)	7	14	14	29	64	129
5 bar(g) purity 98% nitrogen + inerts (Extendible 99.5%)			16.5	33	75	151
Other purities			○	○	○	○
Power consumption (kW)	13*	16	16	32	58	120
Power supply (3 phase) 200 to 480 V, 50/60 Hz **	○	○	○	○	○	○
Cooling water consumption (l/h at 15°C)	-	1,000	1,000	1,900	4,000	7,500
Height (m)	2.20	2.20	2.20	2.40	2.60	2.60
Advised plant room (l x w x h (m x m x m))	2.90 x 3.10 x 3.00	3.90 x 2.60 x 3.00	4.50 x 3.50 x 3.00	4.90 x 3.70 x 3.00	8.70 x 4.80 x 4.00	8.70 x 5.80 x 4.00
Weight (kg)	1,300	1,600	1,800	2,650	4,000	9,000
Noise level (dBA)	70	70	70	70	72	74

STORAGE VESSEL						
Pressure (bar(g))	0.3 - 3	0.3 - 3	0.3 - 5	0.3 - 5	0.4 - 5	0.4 - 5
Liquid nitrogen storage capacity						
200 l	●					
300 l	○	●				
500 l			●	○	○	
1,000 l			○	●	○	○
2,000 l			○	○	●	●
Other storage capacities			○	○	○	○
Level indication and control	●	●	●	●	●	●

MAINTENANCE						
Maintenance interval 6,000 hrs	●	●	●	●	●	●
Consumable parts set	0 to 12,000 hrs					
	○	○	○	○	○	○
	12,000 to 24,000 hrs					
	○	○	○	○	○	○
	24,000 to 36,000 hrs					
	○	○	○	○	○	○
	36,000 to 48,000 hrs					
	○	○	○	○	○	○
Repair parts set	○	○	○	○	○	○
Tool set maintenance	○	○	○	○	○	○
Tool set service & repair	○	○	○	○	○	○
User manual	●	●	●	●	●	●
Operator attention limited to routine checks and filter/oil changes	●***	●	●	●	●	●

SERVICES						
Post commissioning visit	○	○	○	○	○	○
Installation, commissioning and operator training on site	○	○	○	○	○	○
Maintenance engineer training at Stirling	○	○	○	○	○	○
Service engineer training at Stirling	○	○	○	○	○	○
Help desk	●	●	●	●	●	●
Maintenance contract	○	○	○	○	○	○

STANDARD EQUIPMENT						
Helium gas cylinder + regulator	●	●	●	●	●	●
Installation material	●	●	●	●	●	●

OPTIONALS						
Chiller for cooling water supply	n.a.*	○	○	○	○	○
refrigeration capacity (kW at 12°C)		12	12	24	48	96
power consumption (kW)		6	6	12	20	40
floor print (including service space) (m²)		3	3	4	6	10
noise level (dBA)		60	60	60	60	60
weight (kg)		250	250	450	850	1,700
outdoor placement possible / split unit		●	●	●	●	●
Generator set for power supply	○	○	○	○	○	○
Voltage stabilizer for utility power stabilization	○	○	○	○	○	○
Liquid nitrogen handling package (personal protection)	○	○	○	○	○	○

NOMINAL OPERATING CONDITIONS
Plant room temperature 45°C, altitude 250m, relative humidity 95%, cooling water temperature 15°C, power supply: voltage ± 5%, frequency: ± 2%

ALLOWABLE OPERATING CONDITIONS
Plant room temperature 5 - 45°C, altitude 0 - 2,000m, relative humidity 20 - 95%, cooling water temperature 10 - 20°C, power supply: voltage ± 5%, frequency: ± 2% (other conditions on request)

STANDARDS						
European CE safety standard, IP54, IEC 60204 (other standards on request)	●	●	●	●	●	●

FEATURES						
Integrated system diagnostics	●	●	●	●	●	●
Fully automatic start/stop and restart after power failures	●	●	●	●	●	●
No defrosting or purging required	●	●	●	●	●	●
10 minutes start-up time to full production	●	●	●	●	●	●
Single switch operation	●	●	●	●	●	●

- Standard
- Optional
- * Integrated chiller
- ** Power supply can influence the design and construction of the plant
- *** Oil free air compressor

All specifications at nominal operating conditions
Data and design subject to alteration without prior notice