

CRYOCOOL-LN200

Liquid N2 Generators



CRYO Industries of America, Inc.

CRYO Industries has developed a new liquid nitrogen (LN₂) generation, storage, and transfer system designed to solve the multiple problems of cryogen availability, transport, inventory, and handling. Requiring only electricity to operate, our specially designed system and options are specifically tailored to serving the needs of the scientific, educational, and medical industries.

Many users of liquid nitrogen face similar challenges with regard to its availability, transportation to the place of use, and transfer from a storage dewar into the receiving vessel. As many types of modern equipment are completely dependent upon a continuous supply of LN₂ for their operation, these issues can become critical. Whether a remote or rural location makes supplies uncertain, or if the physical layout of your facility makes internal movement of dewars difficult and time consuming, a CRYOCOOL-LN260 liquid nitrogen generator from CRYO Industries can solve the problem by generating LN₂ where it is needed.

We use what we consider the best Nitrogen Gas Generator on the market to supply 99% pure Nitrogen. Domnick Hunter LC/MS nitrogen generators are specifically designed to meet the gas flow, purity and pressure requirements of our CRYOCOOL Systems.

Flow rates range from 12L/minute to 40L/minute and provide total flexibility to allow single or

multiple instruments to be supplied.

Utilizing the pressure swing adsorption technique, the generators provide a continuous stream of clean, dry nitrogen without the need for secondary purification and are fully compatible with all known APCI and ESI interfaces.

Models featuring integral oil-free compressors give increased security of supply, completely removing the reliance on external air supplies.

Features

- Suitable for nebulising, sheath and drying gas
- Integral oil-free compressor
- Fully regenerative, proven durability PSA technology
- Phthalate-free
- Soundproofed compressor box
- Digital interface
- CE, UL and CRN approved
- Global manufacturing support

Benefits

Improved instrument performance

Guaranteed consistent nitrogen purity improves stability and ensures greater reproducibility of results

Low and stable gas supply costs

Payback in less than 18 months

Security of supply

Integral oil-free compressors removes the reliance on

dedicated compressed air supplies

Reduced Health and Safety risks

No manual handling or high pressure gas storage

Peace of mind

Service contracts and extended warranty available

Effortless operation

Gas at the push of a button

Space saving

Fits under bench

Expert advice

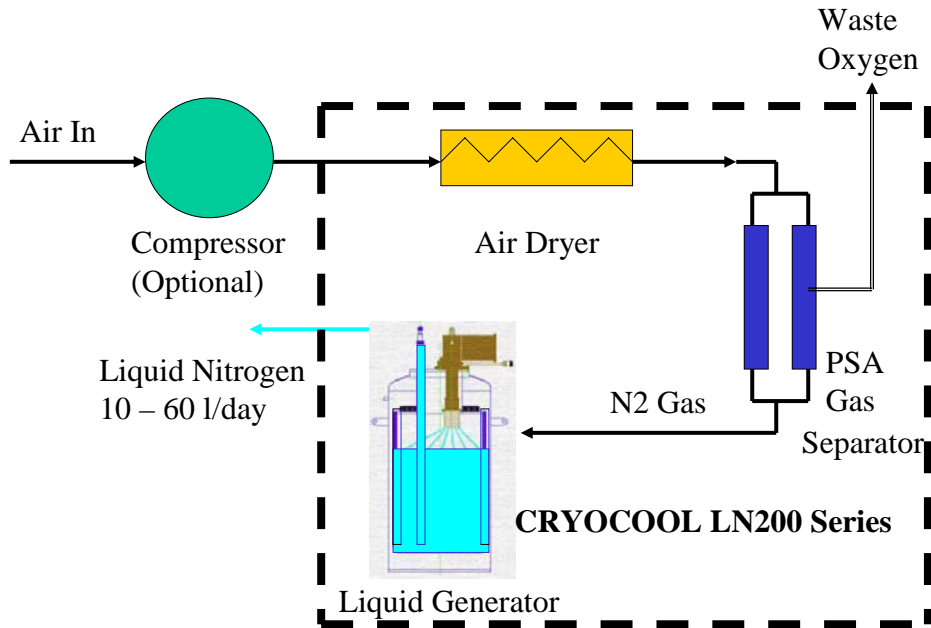
Over 20 years experience of PSA system design

CIA Cryo Industries of America, Inc.

CRYOCOOL Liquid Nitrogen (LN200 Series)

Model	Minimum LN2 output (liters/day)	Dewar Capacity	Watts @ 80K
LN210	10	50 liter	60W
LN220	20	50 liter	125W
LN240	40	100 liter	200W
LN260	60	200 liter	300W

The CRYOCOOL Liquid Nitrogen system produces LN2 using only compressed air. The compressed air is filtered and dried before it enters our Nitrogen Gas Separator. The purified nitrogen gas is then liquefied by a Gifford-McMahon cryocooler which is attached to the main storage dewar. The LN2 is then tapped from the storage dewar via a vacuum insulated LN2 transfer line.



Our LN200 Series liquefier systems include all the items necessary to produce from 10 to 60 liters per day of liquid nitrogen. We can also offer an optional Air Compressor for dedicated use on the production of liquid nitrogen. This Air Compressor has a very low noise rating <55dbA and is built into its own sound proofed portable enclosure.

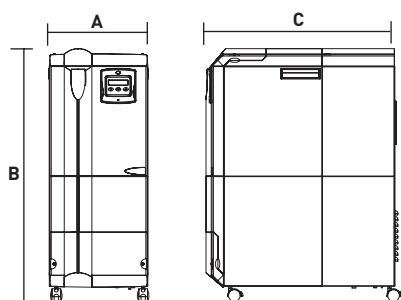
If compressed air is to be supplied, it should be between 2 – 10CFM dry free air delivered at no less than 100 psig.

Technical Specifications

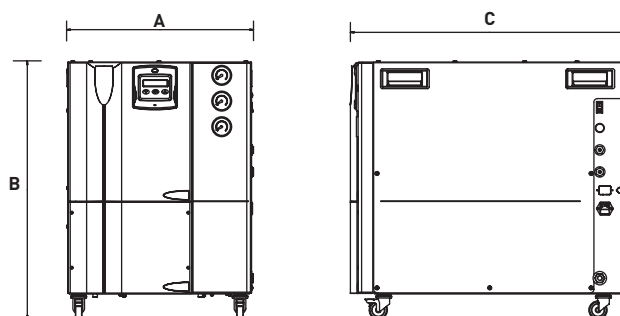
Model	Flowrate L/min	Purity % O ₂	Connections BSP		Voltage ac	Dimensions mm			Weight kg
			Air inlet	Gas outlet		A	B	C	
LCMS 12-1*	12	0.5	–	1/8"	110/230	345	873	663	90
LCMS 15-0	15	0.5	1/4"	1/8"	110/230	510	705	559	89
LCMS 15-1*	15	0.5	–	1/8"	110/230	510	705	826	129
LCMS 18-0	18	0.5	1/4"	1/8"	110/230	345	873	663	77
LCMS 20-0	20	1	1/4"	1/8"	110/230	510	705	559	89
LCMS 20-1*	20	1	–	1/8"	110/230	510	705	826	129
LCMS 30-0	30	1	1/4"	1/8"	110/230	510	705	760	135
LCMS 30-1*	30	2	–	1/8"	110/230	510	705	826	129
LCMS 40-0	40	1	1/4"	1/8"	110/230	510	705	760	135

* with integral compressor

LCMS 12/18



LCMS 15/20/30/40



To ensure optimum performance and longevity of your LC/MS nitrogen generator, domnick hunter recommends the following service kits be used as part of a preventative maintenance program:

230 Vac Models

Model	4000 hours	8000 hours	24000 hours	Also required at 24000 hours if no compressor fitted
LCMS 12*	60 627 0220	–	60 627 0228	–
LCMS 18	60 627 0220	–	60 627 0226	–
LCMS 15-0, 20-0, 30-0, 40-0	60 627 2251	–	60 627 2255	1off 60 627 2257
LCMS 15-1*, 20-1*, 30-1*	60 627 2251	60 627 2253	60 627 2255	–

110 Vac Models

Model	4000 hours	8000 hours	24000 hours	Also required at 24000 hours if no compressor fitted
LCMS 12*	60 627 0220	–	60 627 0224	–
LCMS 18	60 627 0220	–	60 627 0222	–
LCMS 15-0, 20-0, 30-0, 40-0	60 627 2251	–	60 627 2263	1off 60 627 2265
LCMS 15-1*, 20-1*, 30-1*	60 627 2251	60 627 2261	60 627 2263	–

* with integral compressor

For more information on extended warranty and preventative maintenance contract availability please contact your local domnick hunter sales office or log on to www.domnickhunter.com/scientific



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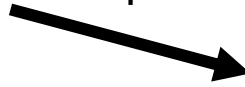
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Main components of the CRYOCOOL-LN260

30LPM of 99% Pure N₂ Gas
With Integrated Air Compressor



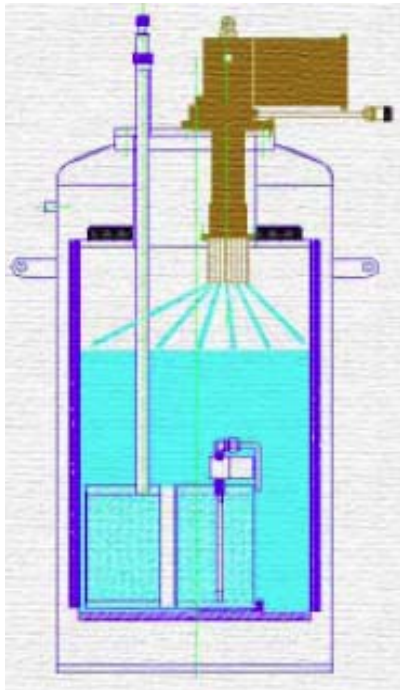
Nitrogen Generator

LN₂ Level Detection

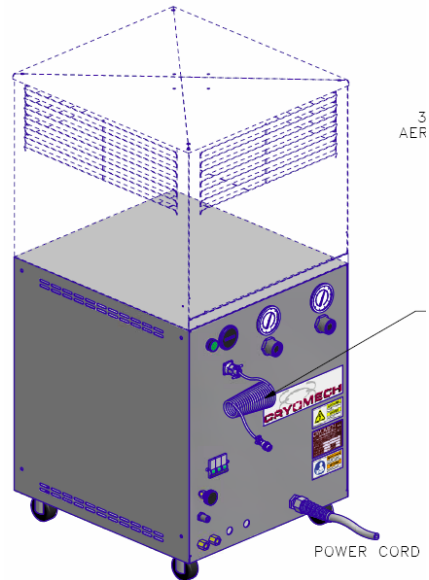


Liquid Level
Instrumentation

GM Refrigerator



200 liter Vacuum Insulated
Liquid Nitrogen Dewar



Helium Compressor

Main individual items for LN260



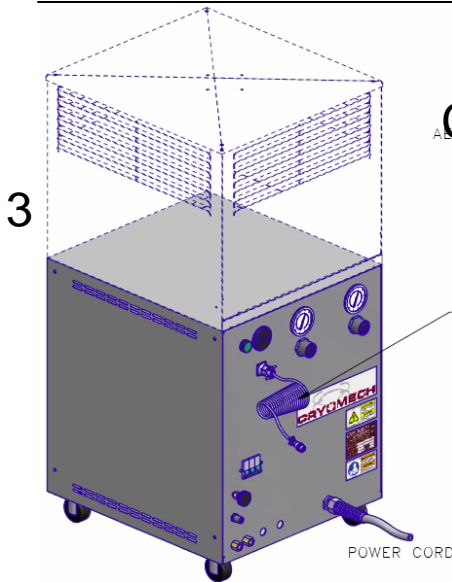
CP970 Helium Compressor

Shipped as part of item 4



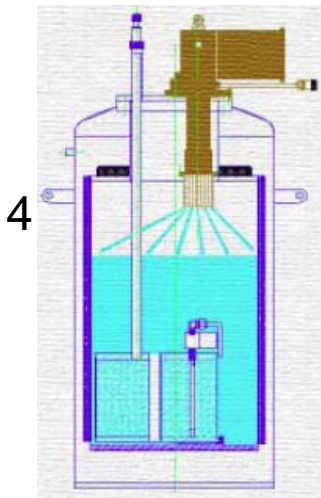
LCMS 30 with Integral Compressor

Shipping weight: 395lb (180kg) Wood Box
Shipping dims: 24 x 32 x 34 inches
(61 x 81 x 86 cm)



CP970 Helium Compressor

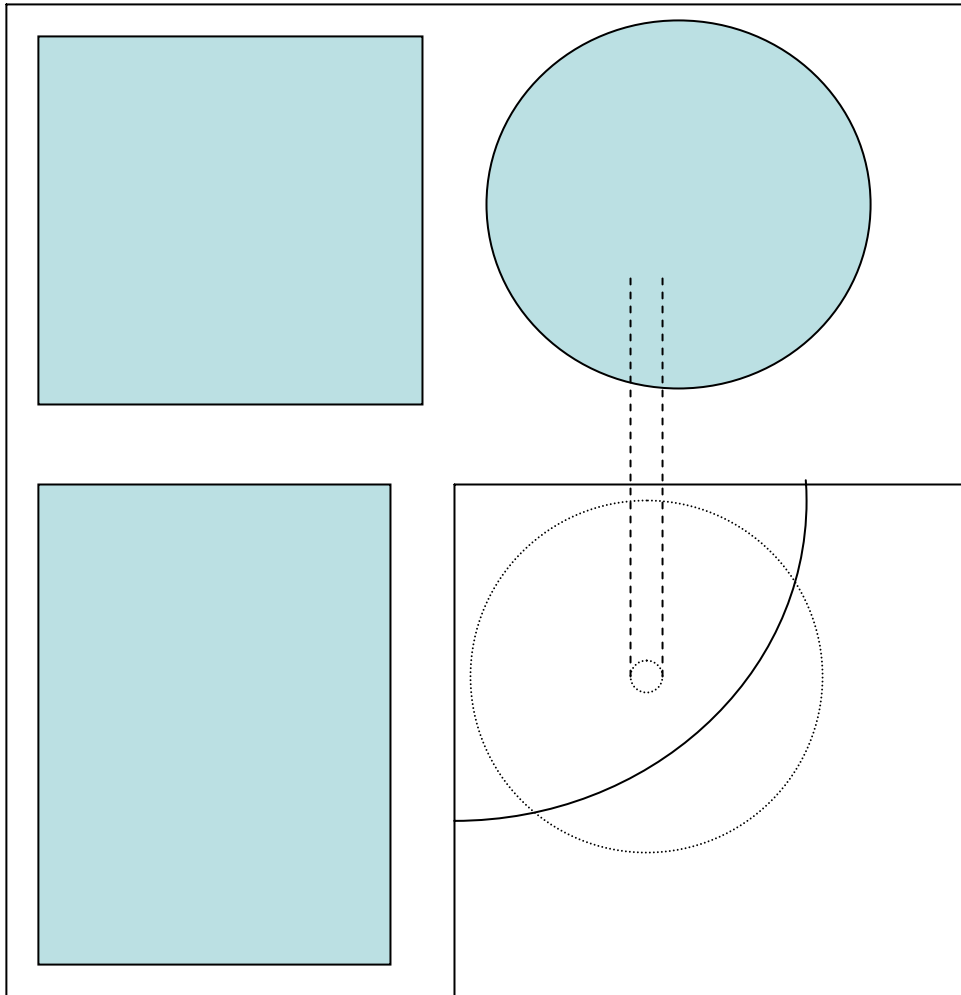
Shipping weight: 435lb (198kg) Wood Box
Shipping dims: 41 x 30 x 36 inches
(104 x 76 x 92 cm)



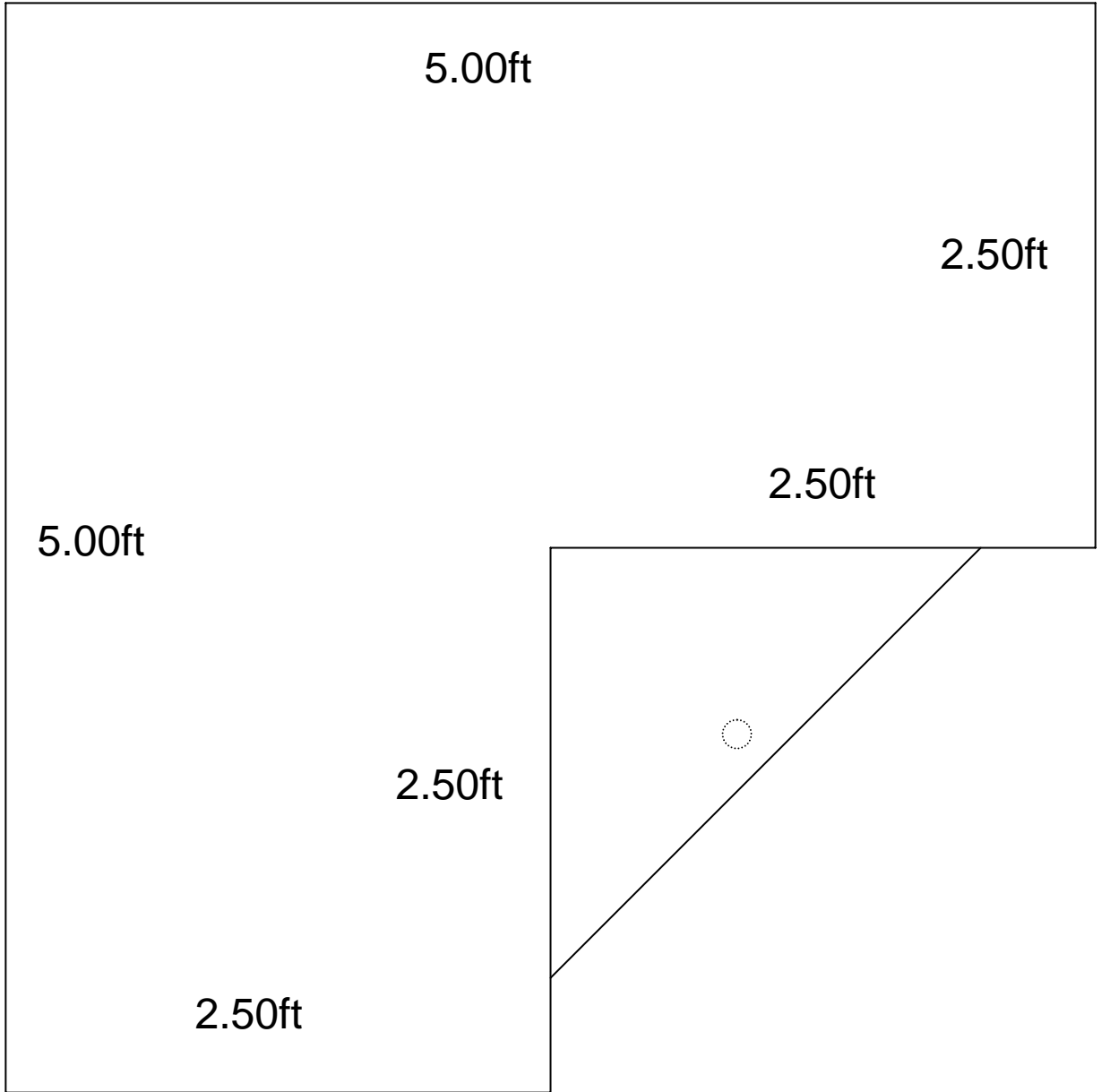
200L Dewar with GM Coldhead

Shipping weight: 516lb (234kg) Wood Box
Shipping dims: 39 x 39 x 64 inches
(99 x 99 x 163 cm)

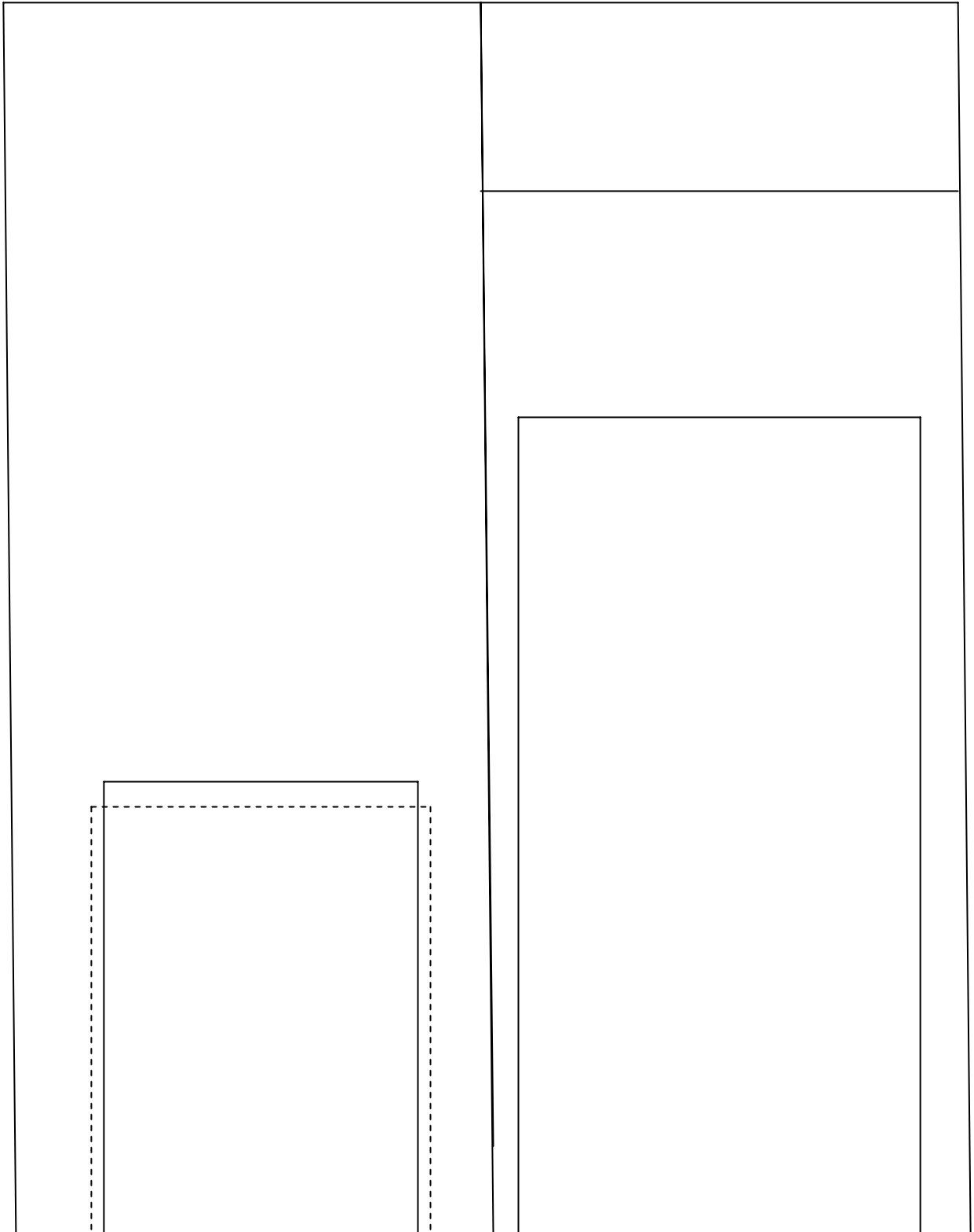
Concept Design for Top Filling System



Measured Layout



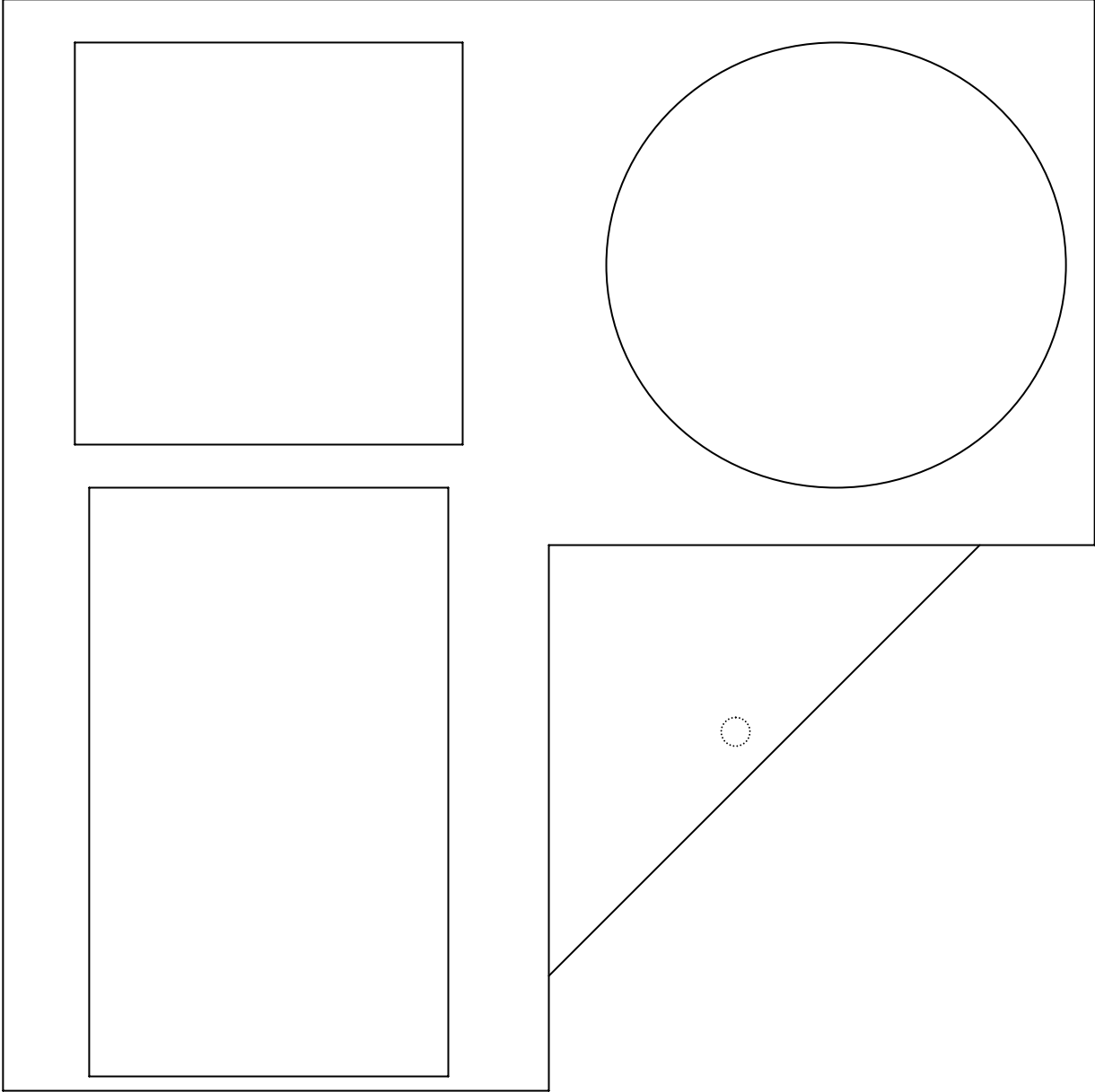
Height 6.5ft Top Filling System



Scale Layout for Top Filling System

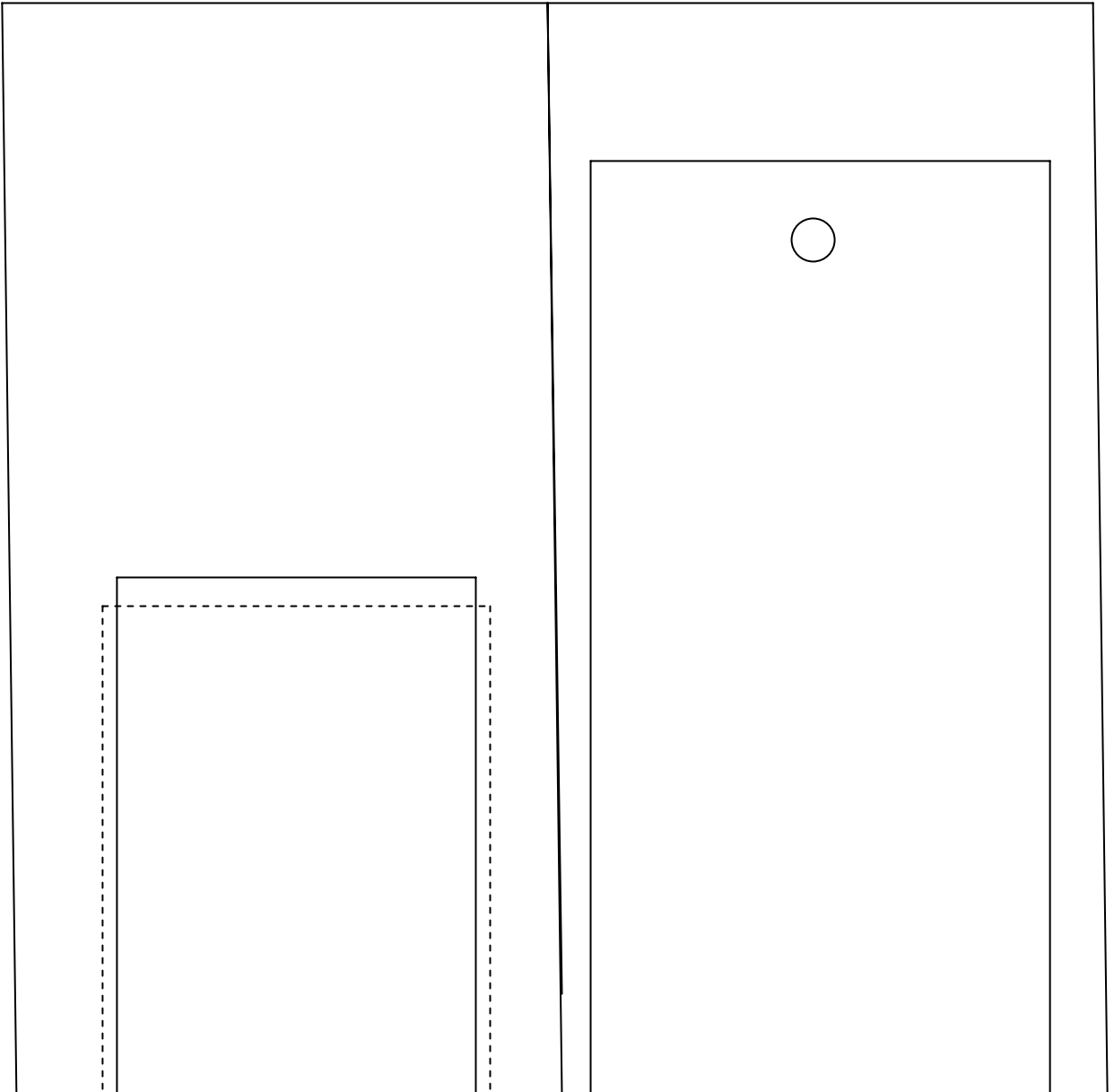
5.00ft

5.00ft

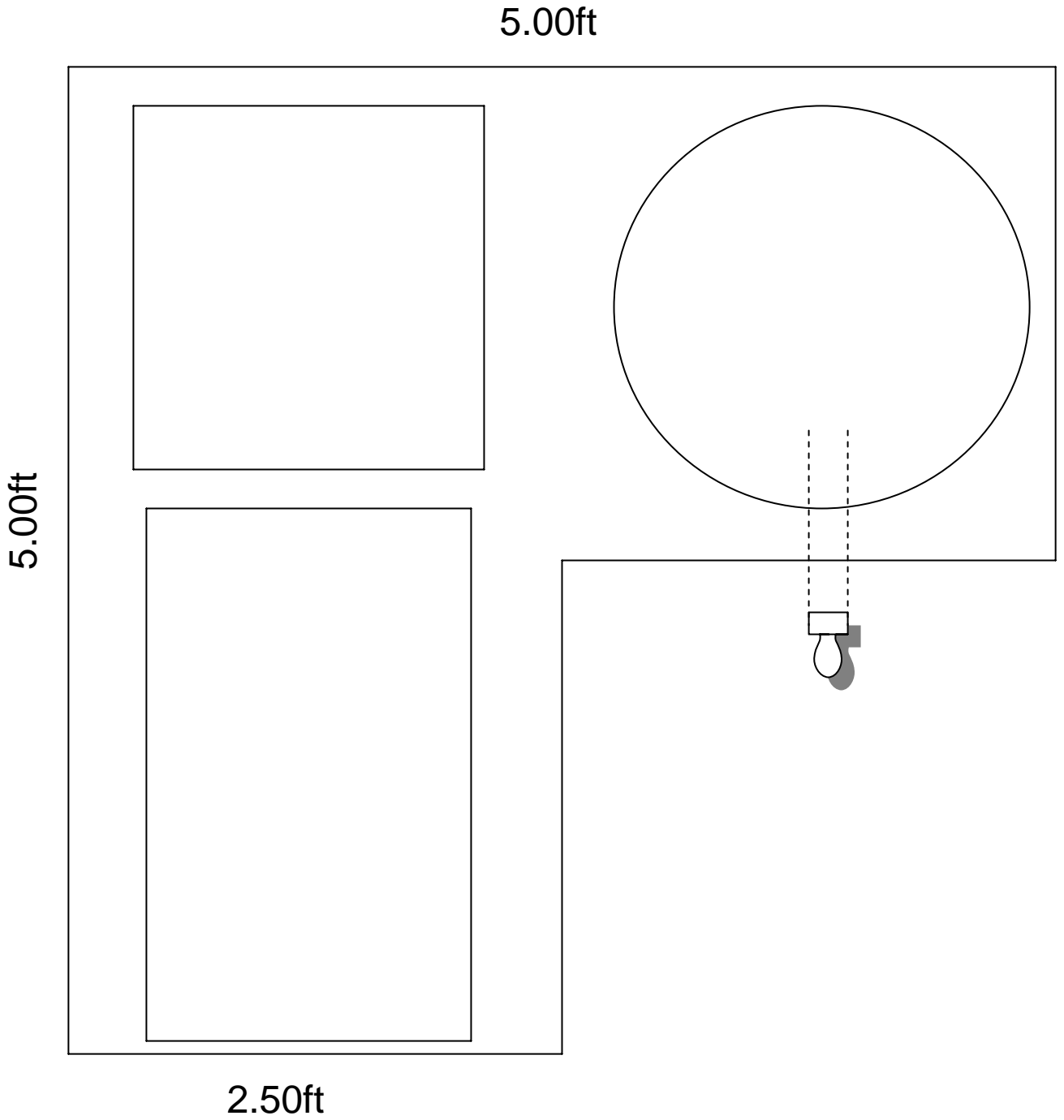


2.50ft

Height 5.0ft Side Filling System



Scale Layout for Side Filling System



CRYO

CRYO Industries

"Performance by Design!"

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