

Clean Cold Power TRU Specifications



Cooling performance	Dearman Engine® powered	Electric standby
35°F	32,842 BTU/hr	37,534 BTU/hr
-0°F	32,586 BTU/hr	20,473 BTU/hr
-20°F	26,615 BTU/hr	13,990 BTU/hr

at 100 °F ambient

Electric standby system	
Voltage - Phase - Frequency	120v single phase to 480v 3 phase 50/60Hz
Supply current rating	30 A (60 A option)
Connection	5-pin - front panel mounted
Functions	Automatic detection; Phase correction

Noise
Designed for 60dB(A) Piek compliance without reduced cooling

Liquid nitrogen (LN ₂) system	
LN ₂ tank	130, 200 or 250 gallons stainless steel, vacuum insulated (492, 757, or 946 liters)
LN ₂ tank pressure	2 bar(g) working pressure, 5 bar(g) relief valve
LN ₂ pump	Close-coupled tank mount with pre-cooled pump head
Pump performance	4.4 lbs /min @ 650 psi
Pump drive	Fast start 24 V electric drive

Vapour compression cycle refrigeration system	
Refrigerant	Low charge mass R452a (typically 12 pounds) (GWP 2140, ULETRU compliant)
Condenser	Low temperature liquid cooled brazed plate heat exchanger for high vapour cycle efficiency
Compressor	Low maintenance 19.1 in ³ Swash plate compressor, 1000 rpm operation
Drive belt	6 rib V belt

CARB Ultra Low Emissions Transport Refrigeration Unit (ULETRU) Ready	
Particulate Matter	Zero
Nitrogen Oxides	Zero
Point-of-use CO ₂ e	Zero

Evaporators	Main	Remote
Airflow rate	1,854 cfm EcoFlow	1,295 cfm EcoFlow
Air flow distribution	Single discharge	Dual discharge
Defrost	Integrated defrost coil	

Temperature control	
Set-point range	-20°F to 59°F
Deadband	+/- 3.6°F, adjustable between +/-1.8°F and +/-12°F
Compartments	Single or dual temperature controlled

Oxygen monitoring system	
Sensor	Fluorescent type sensor, one per compartment
Low oxygen threshold	19%
Status and warnings	Audible alarms and LED status lights
Status reporting	Via HMI and Data acquisition

Controller and data collection	
User interface	Intuitive graphical user interface via 5 push-button control and 4-inch colour LCD screen. Day and night mode. Panel-mounted on main unit enclosure.
Data collection	Compartment air temperatures, system status and operational data. 4G data upload, cloud data storage.
Tracking	GPS
Data management + analytics	Optional web or mobile app

Electrical system	
Voltage	24 V DC
Battery capacity	75 Ah
Battery technology	AGM
Aux battery charging port	Option, customer specified connector
Solar PV charging back-up	200 W standard
Alternator	150A

Fluids	
Engine oil	0w-40 - 1 qt
Heat exchange fluid	Propylene Glycol based – 16 gallons
Defrost fluid	Ethylene Glycol based - 8 gallons
Refrigerant	R452a (GWP 2140, ULETRU compliant)

Dimensions	Mass	
Front mount unit	W 80.7" x H 87.8" x D 17.1"	1670 lb
LN ₂ tank – 130 gal (492L)	L90" x Dia 27.3"	775 lbs (empty) 1774 lbs (full)
Remote evaporator	W 28.5" x L 39.6" x D 8"	112 lbs

Trailer intergration	
LN ₂ refuel access	Specify left or right side of trailer
LN ₂ refuel connections	Dry-break quick-connection, vacuum insulated hose
Available load	Up to 26 US pallets in 53ft trailer
Air guides	Optional
Industry standard mountings	
LN ₂ tank mounted centrally or off-set to customer specification	