



BRIGHTVAULT INFORMATION PACKET

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BRIGHTVAULT® **BrightVault Powered Hybrid Inverter**

Battery - Inverter

OUTPUT POWER	12kW
NOMINAL DC INPUT	48V
CAPACITY	50-9900Ah
VOLTAGE RANGE	43.0 - 63.0V
CONTINUOUS BATTERY CHARGING OUTPUT	275A
CHARGING CURVE	3-STAGE W/ EQUILIZATION
GRID TO BATT CHARGING EFFICIENCY	96.0%
EXTERNAL TEMP SENSOR	INCLUDED
CURRENT SHUNT FOR ACCURATE % SOC	INTEGRATED
EXTERNAL GEN START BASED ON VOLTAGE OR % SOC	INTEGRATED
COMMUNICATION TO LITHIUM BATTERY	CANBUS & RS485

AC Output Power 15kW On-Grid & Off-Grid

CONNECTIONS	120/240/208V SPLIT PHASE
CONTINUOUS AC POWER WITH PV	15kW 62.5A-L (240V)
CONTINUOUS AC POWER FROM BATTERIES	12kW 50A-L (240V)
SURGE AC POWER 10s	24kVA L-L (240V)
SURGE AC POWER 100ms	30kVA L-L (240V)
PARALLEL STACKING	YES – UP TO 12
FREQUENCY	60/50Hz
CONTINUOUS AC POWER WITH GRID OR GENERATOR	48kW 200A L-L (240V) 24kW 200 L-N (240V)
CEC EFFICIENCY	96.5% (Peak 97.5%)
IDLE CONSUMPTION TYPICAL – NO LOAD	90W
SELL BACK POWER MODES	LIMITED TO HOUSEHOLD/FULLY GRID-TIED
DESIGN (DC TO AC)	TRANSFORMERLESS DC
RESPONSE TIME (GRID-TIED TO OFF-GRID)	5ms
POWER FACTOR	+/- 0.9 - 1.0

Solar - inverter

MAX ALLOWED PV POWER	19kW
MAX PV POWER DELIVERED TO BATT & AC OUTPUTS	15kW
MAX DC VOLTAGE (Voc)	500V @ 26A
MPPT VOLTAGE RANGE	150-435V
STARTING VOLTAGE	125V
NUMBER OF MPPT	3
MAX SOLAR STRINGS PER MPPT (SELF-LIMITING)	26A
MAX AC COUPLED INPUT (MICRO/STRING INVERTERS)	19.2kW

General

DIMENSIONS (H x W x D)	31.8" x 18.3" x 10.9"
WEIGHT	135LBS
ENCLOSURE	IP65 / NEMA 3R
AMBIENT TEMPERATURE	-40~60°C, >45°C DERATING
INSTALLATION TYPE	WALL-MOUNTED
WI-FI & LAN COMMUNICATION	INCLUDED
STANDARD WARRANTY (VERIFIED BY HALT TESTING)	10 YEARS

Protections and Certifications

ELECTRONICS CERTIFIED SAFETY BY SGS LABS TO NEC & UL SPECS – NEC 690.4B & NEC 705.4/6	YES
GRID SELL BACK – UL1741-2010/2018, IEE-E1547a-2003/2014, FCC 15 CLASS B, UL1741SA, CA RULE 21, HECO RULE 14H	YES
PV DC DISCONNECT SWITCH – NEC 240.15	INTEGRATED
GROUND FAULT DETECTION – NEC 240.15	INTEGRATED
PV RAPID SHUTDOWN CONTROL – NEC 690.5	INTEGRATED
PV ARC FAULT DETECTION – NEC 690.12	INTEGRATED
PV INPUT LIGHTNING PROTECTION	INTEGRATED
PV STRING INPUT REVERSE POLARITY PROTECTION	INTEGRATED
AC OUTPUT BREAKERS – 200A	INTEGRATED
2 x 200A BATTERY BREAKER / DISCONNECT SURGE PROTECTION	INTEGRATED DC TYPE II / AC TYPE II

Battery Specifications

TOTAL ENERGY	10.24kWh
CAPACITY	200Ah
NOMINAL VOLTAGE	48V/51.2V
VOLTAGE RANGE	43.2V – 57.6V
STANDARD CHARGE CURRENT	25A
MAX. CHARGE CURRENT (CONTINUOUS)	100A
MAX. DISCHARGE CURRENT (CONTINUOUS)	100A
DESIGN LIFETIME (25°C)	20 YEARS
LIFE CYCLES (80% DOD, 25°C)	6000 Cycles
STORAGE TIME / TEMPERATURE	5 months @ 25°C ; 3 months @ 35°C ; 1 month @ 45 °C
CHARGING TEMPERATURE	0°C - 45°C @ 60 ± 20 RELATIVE HUMIDITY
DICHARGING TEMPERATURE	-20°C - 60°C @ 60 ± 20 RELATIVE HUMIDITY
STORAGE TEMPERATURE	0°C - 45°C @ 60 ± 20 RELATIVE HUMIDITY
DIMENSION [L x W x D]	25.59" X 18.90" X 8.74" (650X480X222MM)
WIEGHT [LBS]	198.42LBS / 90KG
ENCLOSURE PROTECTION RATING	IP21
MOUNTING OPTIONS	WALL MOUNTED
CERTIFICATES	UL1642, IEC62619, ROHS, CE-EMC, UN38.3, MSDS
WARRANTY	10 YEARS
SCALABILITY	10.24kWh - UNLIMITED
COMMUNICATION	RS-485, RS-232

Inverter Settings

BULK VOLTAGE SETTING	57.6V
FLOAT VOLTAGE SETTING	56V
ABSORBTION VOLTAGE SETTING	57.6V
EQUALIZATION VOLTAGE SETTING	57.6V

BRIGHTVAULT[®]

BrightVault Powered
Smart Panel

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-20°C to 60°C (-4°F to 140°F)
Enclosure Type	Rittal KL 1511.510
RoHS Compliant	Yes

INSTALLATION

Licensed electrician	Required
Type	Wall mount
Time	3-4 hours

PHYSICAL SPECIFICATIONS

Dimensions	40.0cm x 40.0cm x 12.0cm (15.75in x 15.75in x 4.73in)
Weight	16.8kg (37lbs)
Conductor Length	50.8cm (20in)

ENERGY MEASUREMENT SPECIFICATIONS

Each dedicated circuit metered separately
Dual phase voltage measurement
ANSI C12.20 0.5 Accuracy Class
20 kHz sampling frequency per circuit
Class 3 PCB Assembly

PERFORMANCE SPECIFICATIONS

AC Voltage	120/240V
Feed-In Type	Single & Dual Pole
Warranty	10-Year Limited Warranty

USER ACCESS

Mobile Applications	BrightVault App
Web Application	BrightVault Portal
Data	1-second granularity
Controls	Direct; schedules; modes

COMPATIBILITY AND COMPLIANCE

Panel	Any manufacturer
Breakers	Any manufacturer
Compliance	UL 61010 & 916

SUPPORTED CIRCUIT BREAKERS & LOADS

Amperage	6 channels up to 60A 6 channels up to 30A
# of Circuit Breakers	Up to 12
Up to 4 split core CTs	2x 200A (main service) 2x 200A (generation)

BRIGHTVAULT[®] BrightVault Battery Combiner

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40°C to 40°C (-40°F to 104°F)
Enclosure Type	Type 3R Rainproof Enclosure

INSTALLATION

Licensed electrician	Required
Type	Wall mount

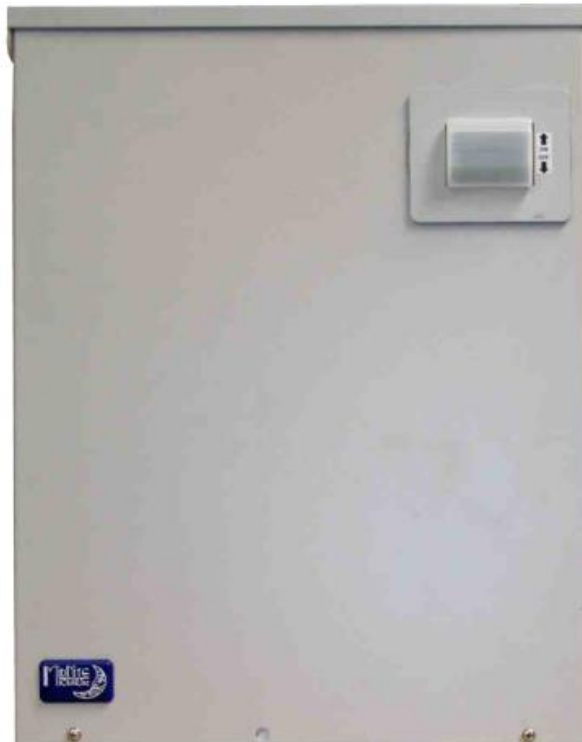
PHYSICAL SPECIFICATIONS

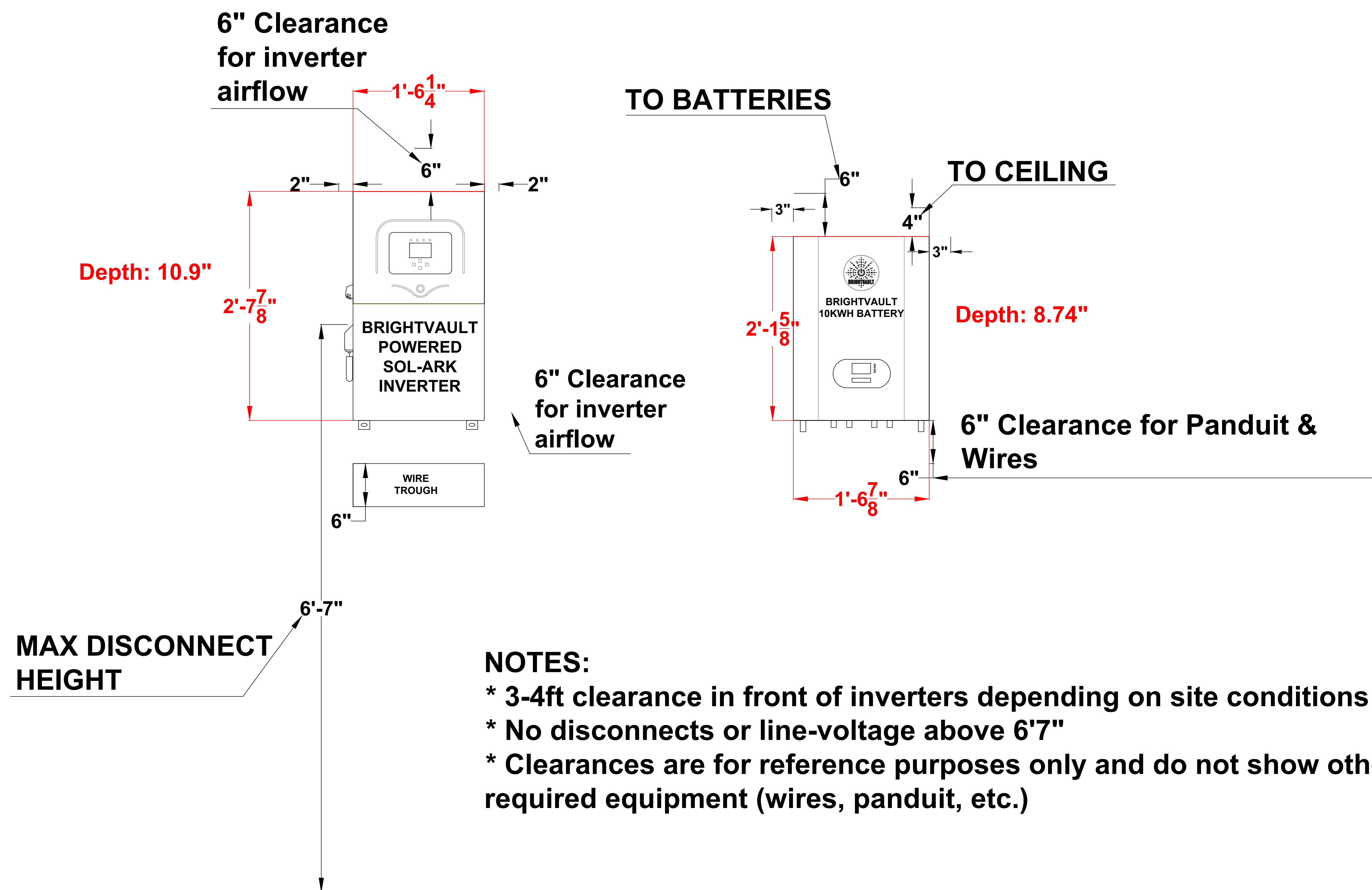
Dimensions	21”T x 16.5”W x 3.5”H
Weight	12 lbs

RATINGS

Max Continuous Current	250A DC
Max Voltage	80VDC

NOTE: Custom DC Bus-Bar & Enclosure is available depending on site space constraints and project needs.





- NOTES:**
- * 3-4ft clearance in front of inverters depending on site conditions
 - * No disconnects or line-voltage above 6'7"
 - * Clearances are for reference purposes only and do not show other required equipment (wires, panduit, etc.)

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REVISIONS		
ISSUE	DATE	DESCRIPTION
01		

ISSUE	DATE	DESCRIPTION
01	10/27/22	

NOTES:
INSTALLATION VARIES DEPENDING ON
NUMBER OF CONTROLLED LOADS ETC

ALL SP WIRE WHIPS COME
PRE-ATTACHED & LABELED

SP WHIP LABELING CONVENTION:
L1L = LINE #1 LOAD
L1B = LINE #1 BREAKER

SMART PANEL DIMENSIONS:
15.75" T x 15.75" W x 4.73" H

