

## PRODUCT OVERVIEW

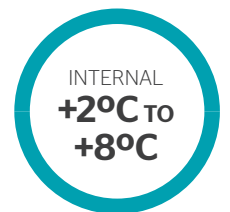
# VC150SDD

**Large capacity Hot Zone rated and WHO pre-qualified solar direct drive combined vaccine refrigerator and water pack freezer.**

**Pre-qualified at both +32°C and +43°C, the bespoke design for use in the cold chain is the result of over 30 years experience gained in supplying solar refrigerators to the most remote corners of the earth.**

### Features & Benefits

- 102 litre vaccine storage capacity
- Water pack freezing capacity: up to 2.4 kg per 24 hrs
- Water pack storage capacity: 20 x 0.6 L
- +5°C to +43°C extended operating temperature range
- Works at WHO solar reference period 3.5kWh/m<sup>2</sup>/24h
- 83hr 42min holdover at +43°C (122 hr 34min at +32°C)
- 77hr 57min autonomy at +43°C (118hr 51min at +32°C)
- Corrosion tested to DIN 8985
- Inbuilt handle with lock
- Inbuilt solar powered temperature display
- All-metal, high strength hinges
- Heavy duty castors to make handling easier
- User-independent Grade A freeze protection
- Completely battery free, with plug and play connectors for easy installation
- Environmentally friendly: R600a refrigerant with low global warming potential and innovative insulation technology giving exceptional energy efficiency
- Packaging tested to industry standards
- Tested to survive ambient storage temperatures up to +70°C
- Stacking baskets for easy-access stock management
- British made
- CFC-free



**Integrated Solar Socket for mobile phone charging and/or temperature monitoring available according to customer requirements.**



\*Product and application images for illustration purpose only.

# VC150SDD Technical Specifications

## Performance

Net vaccine storage capacity	102 litre
Climate zone	Hot zone (+43°C)
Minimum rated ambient temperature	+5°C
Holdover time	83hr 42min at +43°C; 122hr 34min at +32°C
Autonomy time	77hr 57min at +43°C; 118hr 51min at +32°C
Recommended solar array size	> 600 Wp

## Dimensions

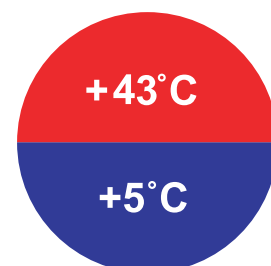
External: H x W x D	992 x 1283 x 735 mm
Shipping weight	170.4 kg
Gross volume	158.1 litre refrigerator 42.9 litre freezer
Waterpack freezing capacity	2.4 kg at +32°C; 2.04 kg at +43°C
Waterpack storage capacity	12.0 kg +32°C; 8.1 kg at +43°C

## Technical Details

Operating voltage	24 to 45 Vdc
Minimum starting voltage	24 Vdc
Minimum starting power	40 W refrigerator, 40 W freezer
Minimum solar radiation for continuous running	125 W/m <sup>2</sup> (using 600 Wp array)
Compressor	2x Danfoss / Secop BD35K
Refrigerant	R600a

## WHO Pre-qualification

Test procedure	E003/RF05.3-VP.3
Performance specification	E003/RF05.3
PQS reference	E003/048



### What is 'Autonomy' and 'Holdover'?

**Autonomy** is the amount of time that the refrigerator can maintain the vaccine load within the temperature range of +2°C to +8°C with minimal solar radiation available and at maximum rated ambient temperature. The VC150SDD has 77hr 57min autonomy at 43°C.

**Holdover** is the amount of time that the refrigerator can maintain the vaccine load within the temperature range of +2°C to +10°C with no solar radiation and at maximum rated ambient temperature.

### Experts in Solar innovation

The Dulas Solar International team provide high quality solar solutions where there is an unreliable or nonexistent grid network. Since 1982, Dulas has supplied solar power systems throughout the world for healthcare, water supply, telecommunications, humanitarian development, education, commerce and communities.

Our products and services include solar vaccine refrigerators and freezers (certified to WHO PQS standards), training and technical advice on the use and maintenance of refrigerator systems, solar water pumping and bespoke solar generating systems for remote locations.