

Abacus IEEE 4.5.5.232

IEEE 485 RECOMMENDED SIZING

Project: Abacus IEEE

Reference No.:

Company:

Date: 22/02/14

Sized By: BENNING (BetaUser)

Valid from 03/05/14 - 03/05/14

## Proposed Battery

Cell Mfg:  
HAWKERCell Type:  
Powersafe VFNominal Capacity:  
190.00 Ah

## Environment

Aging Factor:  
1.00Design Margin:  
1.00Requirement margin:  
1.00State of Charge factor:  
1.00Nominal Temperature 20 °C  
(Lowest 20 °C, Highest 20 °C)Used Plate Format  
(Minimum: 1): 11Number of Strings  
(Minimum: 2): 2Number of Strings  
(Maximum: 2): 2

## Voltages and Number of Cells

Maximum System  
Voltage: 547.20 VMinimum System  
Voltage: 420.00 VAverage System  
Voltage: 504.00 VMaximum Voltage  
Drop: 0.00 VCharging Voltage  
per Cell: 2.28 VEnd Voltage  
per Cell: 1.75 VUsed  
Curve: 1.75 V

## Duty Cycle

Period

Load in kW

Duration

Minutes

130.00

0:01:00:00

60.00

Total Duty Cycle

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0:01:00:00

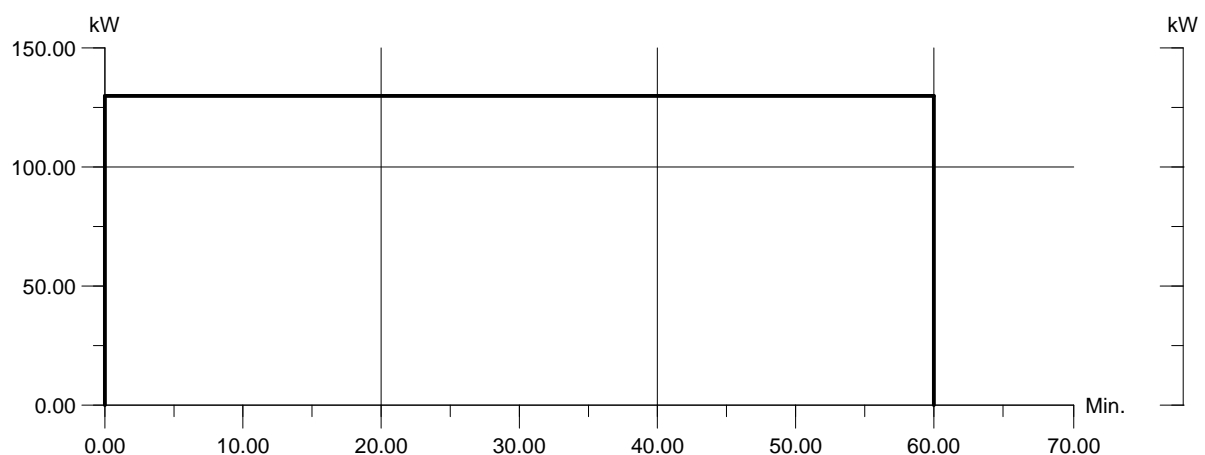
60.00

Random Section

0.00

0:00:00:00

0.00



Calculated Capacity: 379.58 Ah

Recommended Battery: 2 X  
(40 X 12V190F)

This sizing becomes contractual binding only after written confirmation by BENNING.

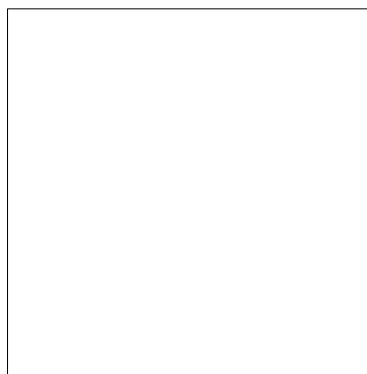
Nominal Capacity:	380.00 Ah
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**Battery Data**

Total Number of Blocks (Number of Blocks X Number of Strings):	80
Block Dimensions (L X W X H) in mm	125.00 X 561.00 X 316.00
Number of Packing Units (1150.00 mm X 750.00 mm each)	8
Total Weight / Block Weight in kg	366720.00 / 4584.00
Total / Block Electrolyte Weight in kg	-
Total / Block Electrolyte Volume in ltr.	-
Internal resistance in mOhm/Unit	0.00
Short circuit current in A	3625.00

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Number of Drums Electrolyte (26.40 ltr. each)	-
Number of Pallets Electrolyte (6 Drums each)	-
Standard	IEC 60896-2
Design positive electrode	
Positive electrode material	
Design negative electrode	
Negative electrode material	
Electrolyte type	
Container material	
Endurance in cycles	-

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**Ventilation**

Necessary air convection in m³/h (Float operation / Boost charge)	4.56 / 36.48
Cross section ventilation openings (inlet and outlet) in cm² (Float operation / Boost)	127.68 / 1021.44

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