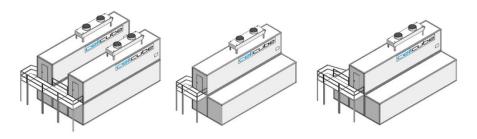


## DC Data Sheet - CellCube FB 250 / FB 500 Series Release 4.0



## Technical Data

Technical Data			I	
_	FB 500-2000	FB 250-1000	FB 250-2000	
Battery technology	Vanadium Redox Flow Battery			
Battery performance DC <sup>1</sup> )				
Rated charge/discharge DC power	470 / 530 kW 235 / 265 kW			
Max. charge / discharge DC power	940 / 800 kW 470 / 400 kW			
Usable energy at DC POC <sup>2)</sup>	,			
@ 100% constant rated DC power				
Auxiliary energy not deducted	2,470 kWh	1,235 kWh	2,470 kWh	
Auxiliary energy deducted <sup>3)</sup>	2,400 kWh	1,200 kWh	2,400 kWh	
Maximum usable energy at DC POC  @ 50% constant rated DC power				
Auxiliary energy not deducted <sup>4)</sup>	2,960 kWh	1,480 kWh	2,960 kWh	
Auxiliary energy deducted	2,800 kWh	1,400 kWh	2,800 kWh	
Cycle life _	> 20,000 @ 100% DOD			
Battery interface				
DC connection	530 910 V, IT-Grid			
Max. DC current	2x 762 A			
Protection DC side	Fuses, insulation monitoring, surge protection device, main switch			
AC connection	400 V, 50 Hz / 60 Hz, 3P+N+PE, TN-S-grid			
Auxiliary power (max. / average) <sup>5)</sup>	40 kW / 16 kW 20 kW / 8 kW		/ 8 kW	
Communication _	MODBUS TCP/IP			
General				
Design lifetime		25 years		
Electrolyte solution	Water based vanadium electrolyte, non-flammable, re-usable			
Noise emission <sup>6)</sup>	< 45 dB(A)			
Standards and directives complied with <sup>7)</sup>	CE			
Ambient temperature range	-15 °C + 45 °C			
Temperature management <sup>8)</sup>		Max. 24 hrs ambient average temperature:		
	27°C @ 2 cycles per day			
<u> </u>	30°C @ 1 cycle per day			

 $<sup>^{\</sup>mbox{\tiny 1)}}$  All data measured at an average electrolyte temperature of  $35\,^{\circ}\mbox{C}$ 

<sup>&</sup>lt;sup>2)</sup> POC = Point of connection

<sup>3)</sup> Refers to "rated energy"

<sup>4)</sup> Refers to "name plate energy"

<sup>5)</sup> Depending on SOC, power, temperature

 $<sup>^{\</sup>rm 6)}$  Sound pressure level at a distance of 10 m  $\,$ 

<sup>7)</sup> Other compliances or Field Evaluations available on request

 $<sup>^{\</sup>rm 8)}$  Other temperature management options available on request. One cycle is equivalent to the turnover of rated energy



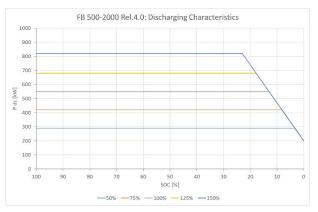
FB 500-2000	FB 250-1000	FB 250-2000

Mechanical data
Enclosure type<sup>9)</sup>
Footprint (w/o stairs) L x W
Height with cooling system
Total weight in operation

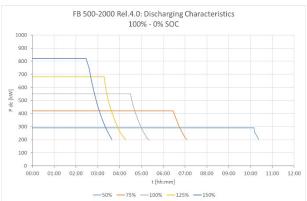
Degree of protection

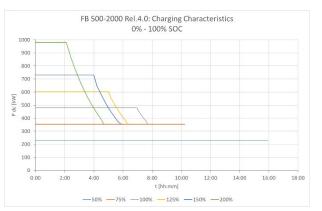
Thermally isolated 40' ISO HC-containers with C3 coating				
12.2 m x 7.4 m	12.2 m x 4.9 m 12.2 m x 7.4 m			
7.5 m				
265 t	135 t	245 t		
IP 54				

## Characteristics FB 500-2000 - -







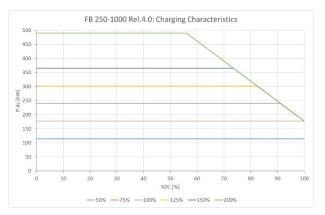


<sup>&</sup>lt;sup>9)</sup> other coating options available on request

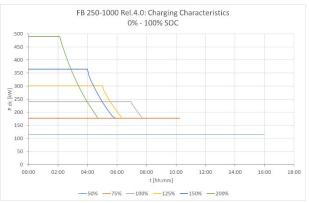


Characteristics - FB 250-1000 -









Characteristics - - FB 250-2000

