

48 Volt quick comparison Table

Lead VRLA OPzV

Calculate required usable Amp Hours at the C rates, then move across to see suggested number of PHI units.

SimpliPhi (PHI) 3.5 kWh

Suggested number of PHI units **Suggested number of PHI units** Peak Power kW
10 mins max Continuous Power kW

Selected C rate	C ₁₀	C ₅	C ₃
Selected dod	30% dod	40% dod	40% dod
OPzV 250 Total Ah	304	268	240
Usable Ah	91.2	107.2	96
Usable kWh	4.4	5.1	4.6
Indicated MWh Life	22	18	16

C ₂	C ₂	Peak Power kW <small>10 mins max</small>	Continuous Power kW
80% dod	90% dod		
138	138	6.1 kW	3.5 kW
110	124		
56	32		
2 units	2 units		

OPzV 420 Total Ah	529	459	405
Usable Ah	158.7	183.6	162
Usable kWh	7.6	8.8	7.8
Indicated MWh Life	38	31	27

207	207	9.2 kW	5.2 kW
166	186		
84	47		
3 units	3 units		

OPzV 600 Total Ah	729	630	564
Usable Ah	218.7	252	225.6
Usable kWh	10.5	12.1	10.8
Indicated MWh Life	52	42	38

276	276	12.3 kW	7.0 kW
221	248		
112	63		
4 units	4 units		

OPzV 800 Total Ah	970	840	750
Usable Ah	291	336	300
Usable kWh	14.0	16.1	14.4
Indicated MWh Life	70	56	50

345	345	15.4 kW	8.7 kW
276	311		
140	79		
5 units	5 units		

OPzV 1000 Total Ah	1200	1045	993
Usable Ah	360	418	397.2
Usable kWh	17.3	20.1	19.1
Indicated MWh Life	86	70	67

483	483	21.5 kW	12.2 kW
386	435		
196	110		
7 units	7 units		

OPzV 1375 Total Ah	1570	1375	1209
Usable Ah	471	550	483.6
Usable kWh	22.6	26.4	23.2
Indicated MWh Life	113	92	81

621	621	27.6 kW	15.7 kW
497	559		
252	142		
9 units	9 units		

Life cycles at dod	5,000	3,500	3,500
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10,000	5,000
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V/cell for above rating 1.8v 1.77v 1.75v
 Temp 20°C

Advantages of using SimpliPhi:

- approximately one tenth of the weight, and one fifth of the volume of VRLA,
- designed to charge at C₂ rate,
- charges approximately 4 to 5 times faster than VRLA,
- excels with high power output and performance in partial state of charge.

24 Volt quick comparison Table

Lead VRLA OPzV

Calculate required usable Amp Hours at the C rates, then move across to see suggested number of PHI units.

Selected C rate	C ₁₀	C ₅	C ₃
Selected dod	30% dod	40% dod	40% dod
OPzV 600 Total Ah	729	630	564
Usable Ah	218.7	252	225.6
Usable kWh	5.2	6.0	5.4
Indicated MWh Life	26	21	19

OPzV 800 Total Ah	970	840	750
Usable Ah	291	336	300
Usable kWh	7.0	8.1	7.2
Indicated MWh Life	35	28	25

OPzV 1000 Total Ah	1200	1045	993
Usable Ah	360	418	397.2
Usable kWh	8.6	10.0	9.5
Indicated MWh Life	43	35	33

OPzV 1375 Total Ah	1570	1375	1209
Usable Ah	471	550	483.6
Usable kWh	11.3	13.2	11.6
Indicated MWh Life	57	46	41

OPzV 2000 Total Ah	2300	2015	1779
Usable Ah	690	806	711.6
Usable kWh	16.6	19.3	17.1
Indicated MWh Life	83	68	60

OPzV 2500 Total Ah	2870	2520	2223
Usable Ah	861	1008	889.2
Usable kWh	20.7	24.2	21.3
Indicated MWh Life	103	85	75

Life cycles at dod	5,000	3,500	3,500
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V/cell for above rating 1.8v 1.77v 1.75v
Temp 20°C

SimpliPhi (PHI) 3.5kWh

Suggested number of PHI units **Suggested number of PHI units** Peak Power kW
10 mins max Continuous Power kW

C ₂	C ₂		
80% dod	90% dod		
276	276		
221	248		
5.6	6.3		
56	32		
2 units	2 units	3.1 kW	2.3 kW

414	414		
331	373		
8.4	9.5		
84	47		
3 units	3 units	4.6 kW	3.5 kW

552	552		
442	497		
11.2	12.6		
112	63		
4 units	4 units	6.1 kW	4.6 kW

690	690		
552	621		
14.0	15.8		
140	79		
5 units	5 units	7.7 kW	5.8 kW

828	828		
662	745		
16.8	18.9		
168	95		
6 units	6 units	9.2 kW	6.9 kW

1104	1104		
883	994		
22.4	25.2		
224	126		
8 units	8 units	12.3 kW	9.2 kW

10,000	5,000
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