

# Performance and durability according Battery Regulation (EU) 2023/1542

		Rated capacity	Capacity fade	Power	Power fade	Internal resistance	Internal resistance increase	Expected life-time	Expected life time	Energy round trip efficiency	Energy round trip efficiency fade	
Product	Item Nr.	Volt (V)	$C_{10}$ 1.8V/cell 20°C Ah	%	$P_{10}$ 1.8V/cell 20°C W	%	mOhm	%	acc ZVEI leaflet No.19 cycles	%	%	
								years				
<b>SUN Battery Frontterminal</b>												
SB12-210A FT V0	20311996	12	200	20	40.0	20	4	100	3	N/A	N/A	N/A
SB12-180A FT V0	2037573	12	180	20	35.9	20	4.2	100	3	N/A	N/A	N/A
<b>SSB Battery SBL</b>												
SBL200-12i	SSB108017	12	200	20	38.4	20	4	100	6	N/A	N/A	N/A
SBL260-12i	SSB140025	12	260	20	51.4	20	3.2	100	6	N/A	N/A	N/A
<b>SSB Battery SBL-HR</b>												
SBL240-12HR	SSB108094	12	212.9	20	42.7	20	3	100	6	N/A	N/A	N/A
SBL270-12HR	SSB108979	12	227.1	20	45.54	20	2.6	100	6	N/A	N/A	N/A
<b>SSB Battery SBL-HR Xtreme</b>												
SBL730-12HR V0 Xtreme	SSB2037900	12	192	20	34.95	20	3	100	6	N/A	N/A	N/A
SBL830-12HR V0 Xtreme	SSB2037901	12	220	20	40.05	20	2.2	100	6	N/A	N/A	N/A
<b>SSB Battery Pure Lead Power</b>												
690-12FT M8V0	SSB2037908	12	170	20	34.4	20	3.5	200	6	N/A	N/A	N/A
780-12FT M8V0	SSB2037909	12	190	20	37.9	20	3	200	6	N/A	N/A	N/A
830-12FT M8V0	SSB2037910	12	226.8	20	45.79	20	2.9	200	6	N/A	N/A	N/A
<b>SSB Battery Grid Power</b>												
300-2HT M8V0	2037724	2	300	20	59.6	20	0.8	150	5	N/A	N/A	N/A
200-2HT M8V0	2037723	2	200	20	39.7	20	0.9	150	5	N/A	N/A	N/A
500-2HT M8V0	2037725	2	530	20	99.3	20	0.6	150	5	N/A	N/A	N/A
800-2HT M8V0	2037727	2	800	20	158.9	20	0.4	150	5	N/A	N/A	N/A
1000-2HT M8V0	2037728	2	1000	20	198.6	20	0.3	150	5	N/A	N/A	N/A
1500-2HT M8V0	2037729	2	1500	20	297.9	20	0.3	150	5	N/A	N/A	N/A
2000-2HT M8V0	2037731	2	2000	20	397.2	20	0.2	150	5	N/A	N/A	N/A
3000-2HT M8V0	2037732	2	3000	20	598.8	20	0.2	150	5	N/A	N/A	N/A

## Battery-Kutter

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# Guidelines for determining the P&D parameter for battery installations

In accordance with Article 10 of the EU Battery Regulation (2023/1542), it is mandatory to provide information on the electrochemical performance and durability (P&D) parameter for rechargeable industrial batteries with a capacity exceeding 2 kWh. This requirement also applies to battery installations with a capacity greater than 2 kWh, which may consist of individual cells or blocs connected in series and/or parallel.

Battery-Kutter offers the P&D parameter values for single cells or blocs, along with a guideline for calculating this parameter for battery installations using Battery-Kutter products.

Parameter	Value of single cell or bloc	Formula
Rated capacity	$C_x$	$C = C_x \cdot N_{\text{Parallel}}$
Capacity fade	$C_{\text{fade},x}$	$C_{\text{fade}} = C_{\text{fade},x}$
Power	$P_x$	$P = P_x \cdot N_{\text{series}} \cdot N_{\text{parallel}}$
Power fade	$P_{\text{fade},x}$	$P_{\text{fade}} = P_{\text{fade},x}$
Internal resistance	$R_x$	$R = (R_x \cdot N_{\text{series}}) \div N_{\text{parallel}}$
Internal resistance increase	$R_{\text{fade},x}$	$R_{\text{fade}} = R_{\text{fade},x}$
Energy round trip efficiency	$\text{RTE}_x$	$\text{RTE} = \text{RTE}_x$
Energy round trip efficiency fade	$\text{RTE}_{\text{fade},x}$	$\text{RTE}_{\text{fade}} = \text{RTE}_{\text{fade},x}$
Expected life-time	$\text{CalendarYears}_x$	$\text{CalendarYears} = \text{CalendarYears}_x$
Expected life-time	$\text{Cycles}_x$	$\text{Cycles} = \text{Cycles}_x$

$N_{\text{series}}$  = Number of cells or blocs connected in series

$N_{\text{parallel}}$  = Number of cells or blocs connected in parallel

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