

Liberator –
Energy Efficiency for the Supply chain.

Liberator Silver – The Synthesis of excellent technology and experience.

The successful development of Liberator Silver from Exide Technologies Industrial Energy results in a battery concept, which is impressive because of excellent reliability and minimal service routine.

Extended watering intervals (up to 120 days), the service requirements and operational costs of this range are reduced to a minimum. The low antimony alloy in combination with an adjusted charging regime results in reduced waterloss. The wide selection of cell types based on proven EpzS and EpzB types fulfils all demands of battery configurations.

Specification of Liberator Silver:

- Level sensor for electrolyte
- Water refilling system (quick refilling)

Options:

- Battery management unit (BMU)
- Tray sensor (liquid in tray)
- Intelligent, microprocessor controlled acid circulation



Liberator Gold –
reduced service requirements.

If you ask for maximum watering intervals Liberator Gold is the right choice. Based on the proven and reliable tubular plate this technology is a further development of this battery type with extremely low maintenance and operational costs. For all capacities water refilling intervals can be extended up to 200 cycles for this range.

The new cell construction, with low height plates results in a greater electrolyte reserve. In addition the low antimony alloy in combination with an adjusted charging regime results in a reduced waterloss.

All these specific characteristics greatly increase the watering intervals which significantly improves operational profitability.

Specification of Liberator Gold:
- Battery monitoring sensor
- Water refilling system (quick refilling)

Option:
- Battery management unit (BMU)
- Tray sensor (liquid in tray)
- Intelligent, microprocessor controlled acid circulation



Liberator-Platinum – The absolutely maintenance free service solution for individual energy requirements.

For real maintenance free batteries retaining high capacities and staying power, the Liberator Platinum is indispensible as the strategic energy solution of the supply chain in a company.

In comparison to standard batteries Exide Technologies takes responsibility for calculating and tailoring the total maintenance work for this battery system in your application you only have to ensure the batteries are charged. The power is tuned to the individual requirements. The system will be installed in the field containing pulse-charge-technology and the Exide service staff cares for all service intervals.

Where logistics operations have to be optimized and cost of processes have to be reduced the Liberator Platinum is the right choice to do everything within one's power on rationalization in the energy balance of modern logistics systems.

Specification of Liberator Platinum:

- Battery management unit (BMU)
- Tray with lid
- Service contract



Liberator-Silver – Cells overview

DIN-Cells

Type 60 Ah Height over cover: 333.5 mm Total height: 365.0 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	120 SL	47	8.3
3 EPzS	180 SL	65	11.8
4 EPzS	240 SL	83	15.4
5 EPzS	300 SL	101	18.8
6 EPzS	360 SL	119	22.2
7 EPzS	420 SL	137	25.7
8 EPzS	480 SL	155	29.3

Type 80 Ah Height over cover: 396.5 mm Total height: 428.0 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	160 SL	47	10.0
3 EPzS	240 SL	65	14.3
4 EPzS	320 SL	83	18.4
5 EPzS	400 SL	101	22.9
6 EPzS	480 SL	119	27.0
7 EPzS	560 SL	137	31.3
8 EPzS	640 SL	155	35.5

Type 90 Ah Height over cover: 463.5 mm Total height: 495.0 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	180 SL	47	12.0
3 EPzS	270 SL	65	17.0
4 EPzS	360 SL	83	21.6
5 EPzS	450 SL	101	26.3
6 EPzS	540 SL	119	31.1
7 EPzS	630 SL	137	36.1
8 EPzS	720 SL	155	41.0

Type 105 Ah Height over cover: 511.5 mm Total height: 543.0 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	210 SL	47	12.8
3 EPzS	315 SL	65	18.5
4 EPzS	420 SL	83	23.9
5 EPzS	525 SL	101	29.4
6 EPzS	630 SL	119	34.9
7 EPzS	735 SL	137	40.6
8 EPzS	840 SL	155	46.1

Type 115 Ah Height over cover: 542,5 mm Total height: 574.0 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	230 SL	47	14.3
3 EPzS	345 SL	65	20.3
4 EPzS	460 SL	83	26.0
5 EPzS	575 SL	101	31.8
6 EPzS	690 SL	119	37.9
7 EPzS	805 SL	137	43.8
8 EPzS	920 SL	155	49.8

Type 125 Ah Height over cover: 568.5 mm Total height: 600 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	250 SL	47	14.7
3 EPzS	375 SL	65	20.8
4 EPzS	500 SL	83	26.8
5 EPzS	625 SL	101	33.0
6 EPzS	750 SL	119	39.2
7 EPzS	875 SL	137	45.5
8 EPzS	1000 SL	155	51.8

Type 140 Ah Height over cover: 683.5 mm Total height: 715.0 mm		Length (l)	Weight
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	280 SL	47	17.2
3 EPzS	420 SL	65	25.4
4 EPzS	560 SL	83	32.9
5 EPzS	700 SL	101	39.9
6 EPzS	840 SL	119	47.2
7 EPzS	980 SL	137	54.8
8 EPzS	1120 SL	155	62.3

Type 155 Ah Height over cover: 713.5 mm Total height: 745.0 mm		Length (l)	Gewicht
Ah (C_5) at 30° C		mm	approx. kg
2 EPzS	310 SL	47	18.0
3 EPzS	465 SL	65	25.8
4 EPzS	620 SL	83	33.6
5 EPzS	775 SL	101	41.0
6 EPzS	930 SL	119	49.1
7 EPzS	1085 SL	137	56.9
8 EPzS	1240 SL	155	64.8

Liberator-Silver – Cells overview

BS-Cells

Type 32 Ah Height over cover: 259.5 mm Total height: 289.5 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	64 SL	46	4.6
3 EPzB*	96 SL	62	6.5
4 EPzB	128 SL	78	8.3
5 EPzB	160 SL	94	10.2
6 EPzB	192 SL	110	12.0
7 EPzB	224 SL	126	13.8
8 EPzB	256 SL	142	15.7

Type 42 Ah Height over cover: 323 mm Total height: 353 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	84 SL	46	6.1
3 EPzB*	126 SL	62	8.4
4 EPzB	168 SL	78	10.8
5 EPzB	210 SL	94	13.1
6 EPzB	252 SL	110	15.5
7 EPzB	294 SL	126	17.8
8 EPzB	336 SL	142	20.2

Type 55 Ah Height over cover: 401 mm Total height: 431 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	110 SL	46	7.3
3 EPzB*	165 SL	62	10.3
4 EPzB	220 SL	78	13.3
5 EPzB	275 SL	94	16.2
6 EPzB	330 SL	110	19.2
7 EPzB	385 SL	126	22.1
8 EPzB	440 SL	142	25.1

Type 65 Ah Height over cover: 453 mm Total height: 483 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	130 SL	46	8.5
3 EPzB*	195 SL	62	11.7
4 EPzB	260 SL	78	15.1
5 EPzB	325 SL	94	18.5
6 EPzB	390 SL	110	21.8
7 EPzB	455 SL	126	25.2
8 EPzB	520 SL	142	28.6

Type 75 Ah Height over cover: 513.5 mm Total height: 543.5 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	150 SL	46	9.6
3 EPzB*	225 SL	62	13.4
4 EPzB	300 SL	78	17.3
5 EPzB	375 SL	94	21.2
6 EPzB	450 SL	110	25.0
7 EPzB	525 SL	126	28.9
8 EPzB	600 SL	142	32.8

Type 86 Ah Height over cover: 567 mm Total height: 597 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	172 SL	46	10.5
3 EPzB*	258 SL	62	14.7
4 EPzB	344 SL	78	19.0
5 EPzB	430 SL	94	23.2
6 EPzB	516 SL	110	27.4
7 EPzB	602 SL	126	31.6
8 EPzB	688 SL	142	35.9

Type 100 Ah Height over cover: 600 mm Total height: 630 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	200 SL	46	11.6
3 EPzB*	300 SL	62	16.3
4 EPzB	400 SL	78	21.0
5 EPzB	500 SL	94	25.7
6 EPzB	600 SL	110	30.4
7 EPzB	700 SL	126	35.2
8 EPzB	800 SL	142	40.2

Type 108 Ah Height over cover: 686 mm Total height: 716 mm	Ah (C_5) at 30° C	Length (l) mm	Weight approx. kg
2 EPzB*	216 SL	46	13.3
3 EPzB*	324 SL	62	18.8
4 EPzB	432 SL	78	24.2
5 EPzB	540 SL	94	29.7
6 EPzB	648 SL	110	35.1
7 EPzB	756 SL	126	40.5
8 EPzB	864 SL	142	46.3

** at present without air agitation system*

Liberator-Gold – Cells overview

Technical characteristics and data

Type 80 Ah Height over cover: 463.5 mm Total height: 495.0 mm Ah (C_5) at 30° C		Length (l) mm	Weight approx. kg
2 EPzS	160 SX	47	11.00
3 EPzS	240 SX	65	15.65
4 EPzS	320 SX	83	20.00
5 EPzS	400 SX	101	24.60
6 EPzS	480 SX	119	29.05
7 EPzS	560 SX	137	33.70
8 EPzS	640 SX	155	38.25

Type 115 Ah Height over cover: 568.5 mm Total height: 600 mm Ah (C_5) at 30° C		Length (l) mm	Weight approx. kg
2 EPzS	230 SX	47	14.50
3 EPzS	345 SX	65	20.55
4 EPzS	460 SX	83	26.40
5 EPzS	575 SX	101	32.40
6 EPzS	690 SX	119	38.55
7 EPzS	805 SX	137	44.65
8 EPzS	920 SX	155	50.80

Type 140 Ah Height over cover: 713.5 mm Total height: 745 mm Ah (C_5) at 30° C		Length (l) mm	Weight approx. kg
2 EPzS	280 SX	47	17.60
3 EPzS	420 SX	65	25.60
4 EPzS	560 SX	83	33.25
5 EPzS	700 SX	101	40.45
6 EPzS	840 SX	119	48.15
7 EPzS	980 SX	137	55.85
8 EPzS	1120 SX	155	63.55

Chargers and accessories





Charging current A	Charging profile: IWaPB Battery capacity (Ah) C_5 12 until 14 hours		7.5 until 8 hours	
15	150	188		
20	189	249		
25	250	304	176	210
30	305	360	211	245
35	361	416	246	281
40	417	471	282	320
45	472	527	321	360
50	528	582	361	400
55	583	638	401	440
60	639	693	441	481
65	694	749	481	518
70	750	804	519	557
75	805	860	558	595
80	861	916	596	634
85	917	971	635	672
90	972	1027	673	711
95	1028	1082	712	749
100	1083	1166	750	800
110			801	880
120			881	960
130			961	1038
140			1039	1115
150			1116	1192

Accessories.

Watering system and BMU





Sensors and battery management

Part		Liberator SILVER Type	Liberator GOLD Type
Level Sensor	standard	ELSB 077	ELSB 122
	dashboard	ELSB 077 R	ELSB 122 R
Tray Sensor	standard	LITB 000	LITB 000
	dashboard	LITB 000R	LITB 000R
BMS	standard	BMSB 077	BMSB 122
	dashboard	BMSB 077R	BMSB 122 R
BMU	100	EBMU 100	EBMU 100
	250	EBMU 250	EBMU 250

Water refilling system

	24 Volt	48 Volt	80 Volt
BFS Silver	see separate selection table (on request)		
BFS Gold	BFS 1244 PS	BFS 2444 PS	BFS 4044 PS
Aquajet	AQ J12 PS	AQ J24 PS	AQ J40 PS

Air agitation

	24 Volt	48 Volt	80 Volt
Type	Air 12	Air 24	Air 48

Liberator – the economic solution.

Complete range

The innovative Liberator battery concept by Exide Technologies Industrial Energy introduces a new standard in Motive Power cells.

The Liberator Silver range consists of a complete DIN and BS cell range in LM design (low Sb alloy and sophisticated charging Technology).

Liberator Gold range comprises cells with reduced plate height and low Sb alloy for extra long watering intervals. Electronic components for safe operation round off this range.

Liberator Platinum range is the full service battery concept that provides the end user a complete maintenance free system and flexible service contracts.

Liberator batteries are the ideal choice for light to heavy applications.

	Charging	Watering in days up to
LIBERATOR SILVER	Pulse	80
	Hybrid	120
LIBERATOR GOLD	Pulse	150
	Hybrid	200
LIBERATOR PLATINUM	Full Service	

Reduced service costs

Compared to standard traction batteries the Liberator concept will save money and manpower. Although acquisition and charger costs are slightly higher than for standard batteries, long-term cost benefits result of low energy and service expenses.

Cost deviation of Liberator

