

# FULBAT<sup>®</sup>

## INDUSTRIAL BATTERY

### INDUSTRIAL BATTERY RANGE



AGM | GEL | LiFePO<sub>4</sub>



Feel the Power!

2022-2023



# ABOUT US



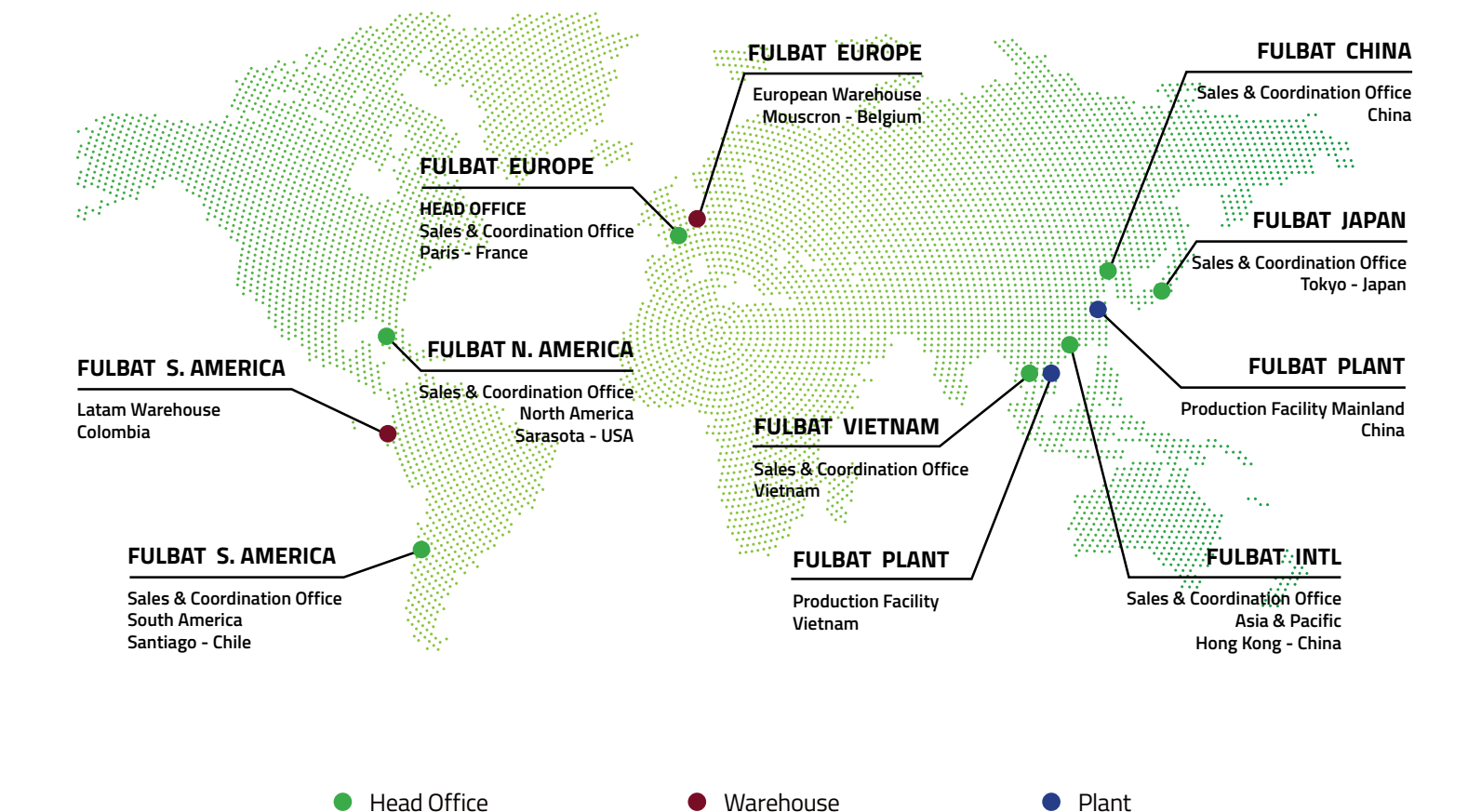
French based company, Fulbat is a leading force in the battery business, present in both replacement and OEM markets. Founded in 2005, we are constantly developing, manufacturing, marketing and selling lead-acid batteries, as well as lithium batteries and battery chargers.

With our technical knowledges and experience, we are able to design new innovative battery solutions to meet the current customers' expectations. We offer an exhaustive program of Starter batteries, Industrial batteries and Motive Power batteries, covering a full range of application. Our Industrial Battery range is designed to cover all industrial applications.

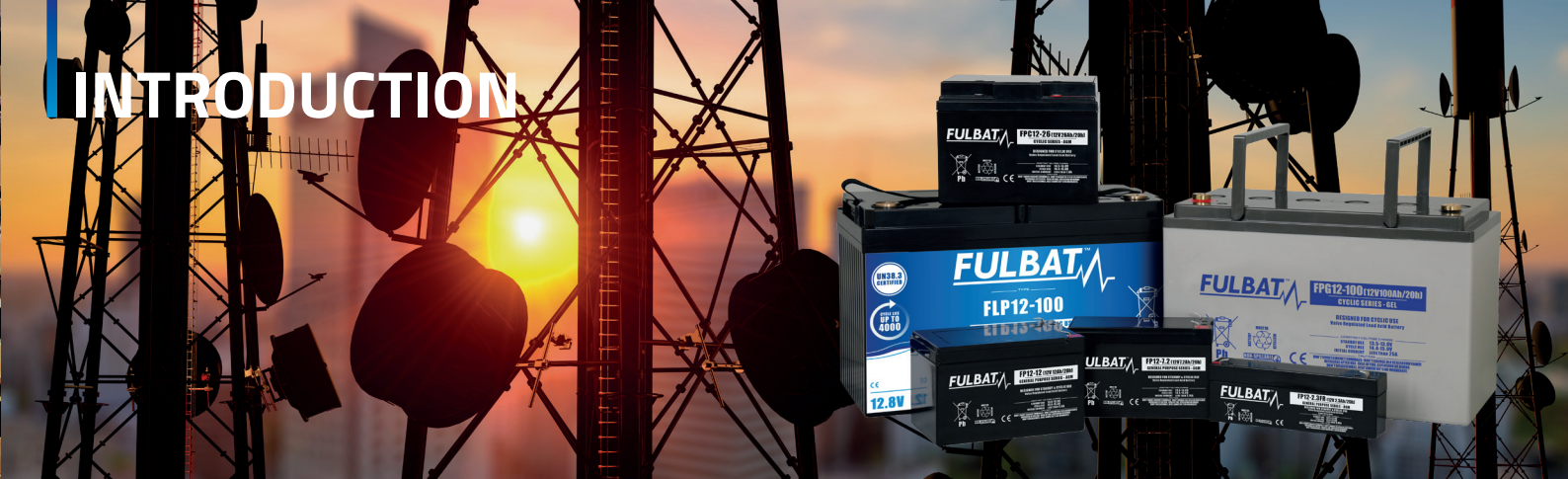
Fulbat batteries and chargers are widely distributed on all continents through a strong distributor's network, and are very well recognized as qualitative, performing and reliable products.

Manufactured according to the most innovative production processes, Fulbat products are certified by ISO 9001, ISO 14001 and TS 16949.

# WORLDWIDE PRESENCE



# INTRODUCTION



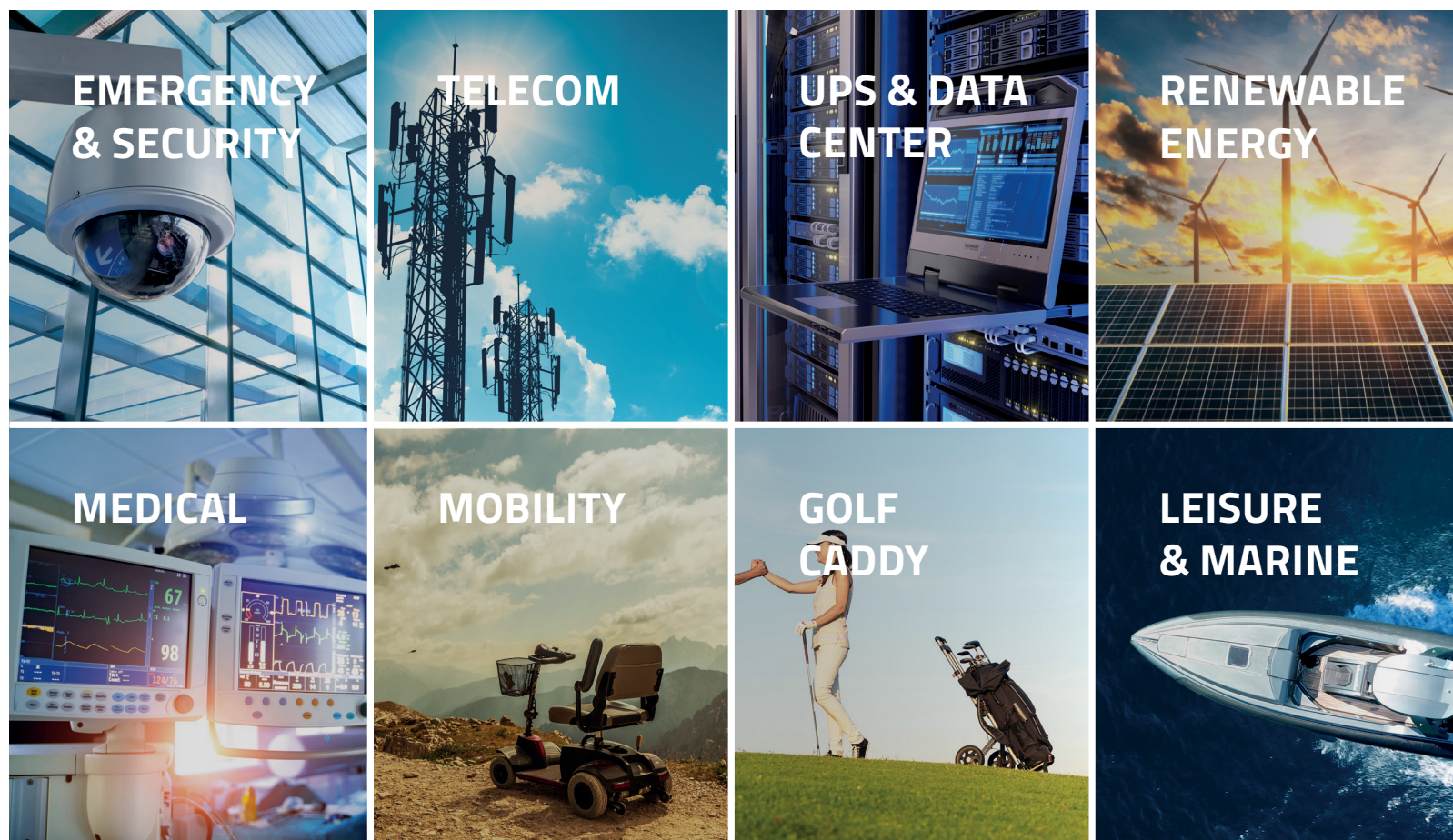
Fulbat Industrial Battery is composed of 2 types of batteries : Stationary and Cyclic uses.

Also called back-up batteries, the stationary batteries take over in case of electrical system failure. Always in standby, these batteries are discharged only occasionally and do not require any maintenance. These batteries can be found in many applications areas such as security, telecommunication, UPS, medical sector where no failure is allowed.

Cyclic batteries, on the other hand, are used as the main source of energy and can support many charge and discharge cycles (more or less deep, depending on the technology – AGM, GEL, Lithium). This type of battery can be found in many applications such as small mobility (golf caddy, electric wheelchair...), energy storage (solar, wind) or leisure (marine, camping-car).

# APPLICATIONS

Fulbat Industrial Battery covers the wide majority of industrial applications.





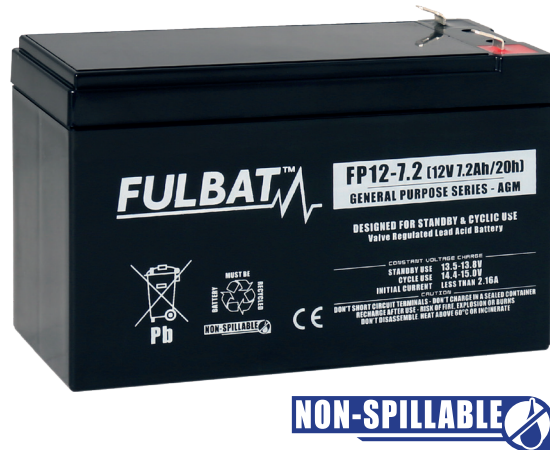
# GENERAL PURPOSE AGM RANGE

Maintenance free & reliable

FP Series are general purpose batteries with 5 years design life in float service (8 years from 40Ah). With advanced AGM valve regulated technology and high purity raw material, the FP series batteries ensure high performance and reliable standby service life.

## GENERAL INFORMATION

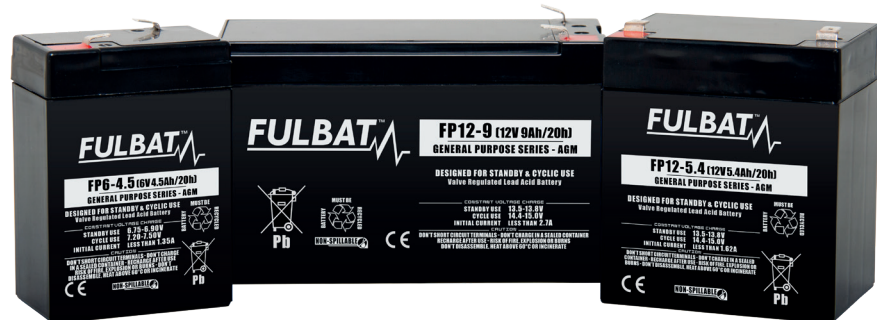
- Use: standby / light cyclic use
- Technology: AGM (VRLA)
- Available voltages: 4V - 6V - 12V
- Capacities from 0.8Ah to 250Ah
- Design life at 20°C ambient temperature:
  - 5 years up to 33Ah
  - 8 years from 40Ah
- Case material: ABS UL94-HB / FR version (UL94-V0) in option\*



## FEATURES

- Maintenance free & non-spillable
- AGM ( Absorbent Glass Mat) technology assures no free electrolyte
- Low self-discharge rate (about 3% per month at 20°C)
- Lead calcium grids for superior life
- Operate in any orientation (excluding continuous inverted use)
- Wide range of operating temperatures
- Rugged impact resistance ABS case
- Low gas emission due to high gas recombination of 99% (VRLA)

## APPLICATIONS



\*compliant with fire standard EN 60950-1 on flammability and fire resistance.

Fulbat designation	Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
				L	W	H	Total height			
FP4-3.5	4	3.5	3.3	90	34	59	65	0.45	T1	1
FP6-1.2	6	1.2	1.1	97	24	51.5	57.5	0.29	T1	1
FP6-2.8	6	2.8	2.6	66	33	97	103	0.55	T1	5
FP6-3.2	6	3.2	3	134	34	60	66	0.67	T1	1
FP6-4	6	4	3.7	70	47	100	106	0.65	T1	5
FP6-4.5	6	4.5	4.2	70	47	100	106	0.81	T1	5
FP6-6	6	6	5.6	70	47	100	106	0.9	T1	5
FP6-4.5S	6	4.5	4.2	67	67	96	109	0.78	S	-
FP6-5	6	5	4.7	169.5	34.5	70	74	0.95	T1	1
FP6-7.2	6	7.2	6.7	150	34	94	100	1.07	T1	1
FP6-10	6	10	9.3	151	50.5	94	100	1.54	T1	1
FP6-12	6	12	11.2	151	50.5	94	100	1.63	T2	1
FP12-0.8 (1)	12	0.8	0.8	96	25	62	62	0.36	JST	6
FP12-1.2 (1)/(2)	12	1.2	1.1	97	43	52	58	0.57	T1	3
FP12-2.1 (2)	12	2.1	2.1	178	35	60	66	0.97	T1	1
FP12-2.2	12	2.2	2.1	70.5	47.5	97	103	0.8	T1	1
FP12-2.3 (1)	12	2.3	2.1	178	35	60	66	0.97	T1	1
FP12-2.3C	12	2.3	2.1	182	24	61	61	0.8	Contacts	-
FP12-2.6	12	2.6	2.3	178	35	60	66	0.97	T1	4
FP12-2.9	12	2.9	2.7	79	56	99	105	1.1	T1	2
FP12-3.2 (1)/(2)	12	3.2	3	134	67	59.5	65.5	1.35	T1	3
FP12-4L	12	4	3.7	195	47	70	76	1.6	T1	1
FP12-4.5 (1)	12	4.5	4.2	90	70	101	107	1.44	T1	1
FP12-5.4	12	5.4	5	90	70	101	107	1.65	T2	1
FP12-5	12	5.4	4.7	151	53	93	99	1.75	T1	4
FP12-5.5	12	5.5	4.7	151	53	93	99	1.75	T2 + T1	4
FP12-7.2 (1)	12	7.2	6.7	151	65	93.5	99.5	2.04	T1	4
FP12-7.8	12	7.8	7.3	151	65	93.5	99.5	2.5	T2	4
FP12-9	12	9	8.3	151	65	93.5	99.5	2.4	T2	4
FP12-10H	12	10	9.3	151	65	111	117	3.2	T2	4
FP12-12 (1)	12	12	11.2	151	98	95	101	3.24	T2	4
FP12-18 (1)	12	18	16.7	181.5	76.5	167.5	167.5	5.4	T12	2
FP12-20	12	20	18.6	181.5	77	167.5	167.5	5.78	T12	2
FP12-24 (1)	12	24	22.3	167	175	125	125	7.2	T12	2
FP12-24H	12	24	22.3	164	125	174	174	8.45	T12	2
FP12-28	12	28	26	166	175	125	125	8.4	T12	2
FP12-33	12	33	30.7	195	130	164	178	10.5	T6	1
FP12-40 (1)	12	40	38	197	165	170	170	12	T6	2
FP12-50	12	50	48	197	165	170	170	14.2	T6	2
FP12-55	12	55	52	257	132	200	200	15.7	T6	1
FP12-60	12	60	56	229	138	205	211	16.2	T6	1
FP12-65 (1)	12	65	62.1	348	167	178	178	21.2	T6	1
FP12-65H	12	65	60	260	168	208	214	18.4	T6	1
FP12-75	12	75	73	348	167	178	178	21.4	T6	1
FP12-80	12	80	78	260	168	208	214	22.3	T6	1
FP12-85H	12	85	83	260	168	208	214	23.8	T6	1
FP12-100	12	104	100	330	173	212	220	30.6	T11	1
FP12-120	12	124.8	120	408	177	225	225	35	T11	1
FP12-150	12	156	150	483	170	238.5	238.5	43.2	T11	1
FP12-200	12	208	200	522	240	218	224	59.8	T11	3
FP12-250	12	260	250	522	268	220	226	72.8	T11	3

(1) Available in FR range / (2) Available in VdS range

\*Terminals / Layout p.14



# FRONT TERMINAL AGM RANGE

Easy to install & maintain

FFT batteries are designed for applications that demand high levels of reliability and safety, FFT batteries offer a long service life up to 12 years. Thanks to their front terminal design, these batteries allow rapid installation and easy access for maintenance.

## GENERAL INFORMATIONS

- Use: standby
- Technology: AGM (VRLA)
- Available voltage: 12V
- Capacities from 100Ah to 190Ah
- 12 years design life at 25°C ambient temperature
- Case material: ABS UL94-HB / FR version (UL94-V0) in option\*

## FEATURES

- Front access to terminals
- Installation, maintenance and supervision easy
- Ideal for 48V system
- Ideal for 19" or 23" racks or site cabinets
- Maintenance free & non-spillable
- AGM ( Absorbent Glass Mat) technology assures no free electrolyte
- Low self-discharge rate (about 3%/month at 20 °C)
- Wide range of operating temperatures
- Low gas emission due to high gas recombination of 99% (VRLA)

## APPLICATIONS



Fulbat designation	Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals**	Layout**
				L	W	H	Total height			
FFT12-100	12	106	100	508	110	238.5	238.5	32	T6	2
FFT12-150	12	157.6	150	551	110	288	288	44.5	T6	2
FFT12-190	12	202	190	560	126	320	320	57	T6	2

\*compliant with fire standard EN 60950-1 on flammability and fire resistance.

\*\*Terminals / Layout p.14

# HIGH RATE AGM RANGE

Maintenance free & reliable

FPH Series are high rate batteries with 12 years design life in float service. With advanced AGM valve regulated technology and high purity raw material, the FPH batteries ensure reliable standby service life and high performance during high current discharge requirements.

## GENERAL INFORMATIONS

- Use: standby
- Technology: AGM (VRLA)
- Available voltage: 12V
- Capacities from 9Ah to 46.5Ah
- 12 years design life at 25°C ambient temperature
- Case material: ABS UL94-HB / FR version (UL94-V0) in option\*

## FEATURES

- Excellent high rate discharge performance
- 12 years design life at 25°C (5 years for FPH12-35W)
- Maintenance free & non-spillable
- AGM ( Absorbent Glass Mat) technology assures no free electrolyte
- Low self-discharge rate (about 3% / month at 25°C)
- Wide range of operating temperatures
- Low gas emission due to high gas recombination of 99% (VRLA)

## APPLICATIONS



Fulbat designation	Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (5Hr)	Watts/cell (10min) 1.6VPC at 25°C (W)	Dimensions mm (±2mm)				Net weight (kg)	Terminals**	Layout**
					L	W	H	Total height			
FPH12-35W	12	9	7.9	45.5	151	65	93.5	99	2.5	T2	4
FPH12-750W	12	26	21.9	126.1	166	175	125	125	8.6	T12	2
FPH12-1100W	12	46.5	45	185.9	197	165	170	170	14.2	T6	2

\*compliant with fire standard EN 60950-1 on flammability and fire resistance.

\*\*Terminals / Layout p.14



# CYCLIC AGM RANGE

Robust & long cycle life

FPC Series are deep cycle batteries specially designed for long duration cyclic applications (where the battery is frequently charged and discharged). With advanced AGM valve regulated technology and oversized negative plates, the FPC Series ensure very good cyclic performance with greater depth of discharge for mobility-type applications such as medical, golf and also renewable energies storage.

## GENERAL INFORMATIONS

- Use: cyclic use
- Technology: AGM (VRLA)
- Available voltages: 6V - 12V
- Capacities from 8Ah to 200Ah
- Cycle life:
  - Up to 350 cycles at 100% DOD\* (50% capacity @20°C)
  - Up to 800 cycles at 50% DOD\* (50% capacity @20°C)
- Case material: ABS UL94-HB

\*Depth Of Discharge



## FEATURES

- Maintenance free & non-spillable
- High cyclic performances: x2 compared to AGM standard batteries
- Over dimensioned negative plate & enhanced conception for longer cycle life
- Good recovery from deep discharge
- Lead calcium grids for superior life
- Lower internal resistance for higher current discharge
- Low self-discharge rate (about 3% per month at 20°C)
- Wide range operating temperatures
- Operation in any orientation (excluding continuous inverted use)
- Robust construction: strong resistance to vibrations
- Low gas emission due to high gas recombination of 99% (VRLA)

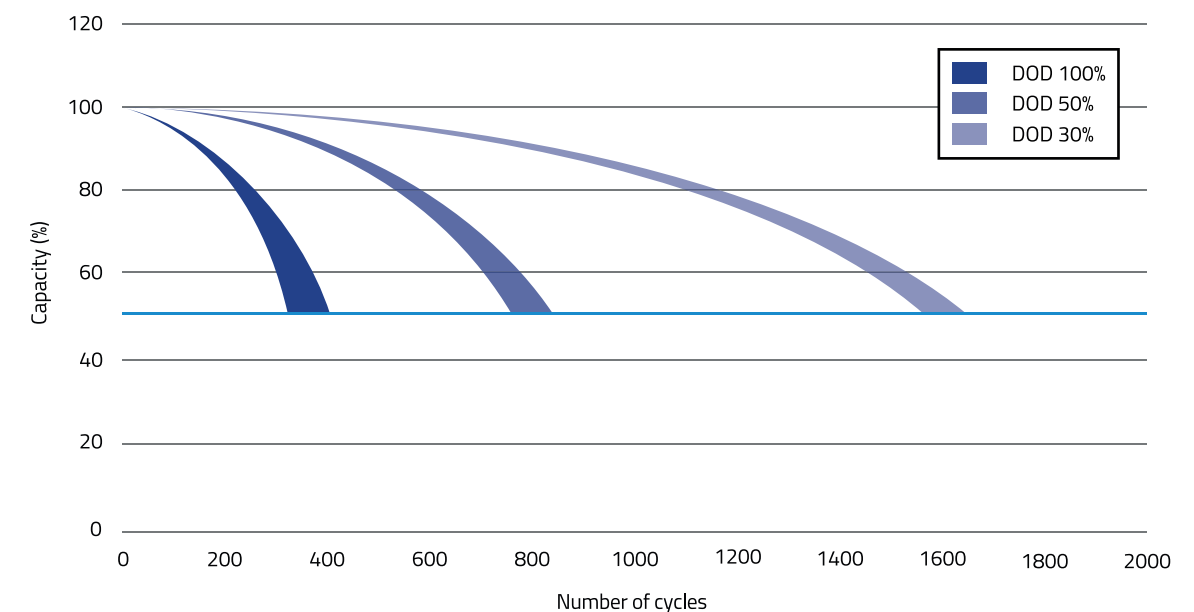


## APPLICATIONS



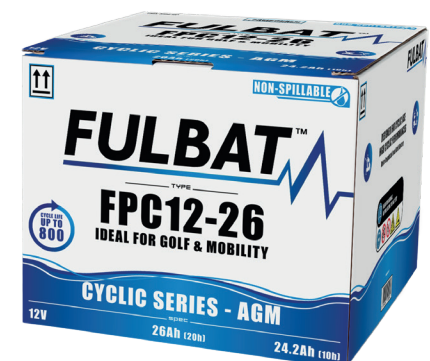
Fulbat designation	Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
				L	W	H	Total height			
FPC6-13	6	13.9	13	151	50.5	94	100	2.05	T2	1
FPC12-8	12	8	7.2	151	65	93.5	99.5	2.5	T2	4
FPC12-9	12	9	8	151	65	93.5	99.5	2.8	T2	4
FPC12-13	12	13.9	13	151	98	95	101	4.05	T2	4
FPC12-20	12	20	18	181.5	76.5	167.5	167.5	6	T12	2
FPC12-26	12	26	24.2	165	176	125	125	8.5	T12	2
FPC12-28	12	28	26	166	175	125	125	9.35	T12	2
FPC12-35	12	35.4	33	195	130	164	182	11.65	T6	1
FPC12-40	12	40.8	38	197	165	170	170	14.2	T6	2
FPC12-60	12	60	56	229	138	210	210	17.7	T6	1
FPC12-80	12	80.4	75	260	168	208	214	22.3	T6	1
FPC12-100	12	107.2	100	330	173	212	220	30.6	T11	1
FPC12-120	12	128.6	120	408	177	225	225	37.3	T11	1
FPC12-160	12	160.8	150	483	170	238.5	238.5	43.2	T11	1
FPC12-200	12	214.4	200	522	240	218	224	62.2	T11	3

## CYCLE LIFE



## PACKAGING

- Are delivered in color box:
  - FPC12-13
  - FPC12-20
  - FPC12-26
  - FPC12-35



\*Terminals / Layout p.14



# CYCLIC GEL RANGE

Ideal in harsh conditions

FPG Series are deep cycle batteries specially designed for long duration cyclic applications (where the battery is frequently charged and discharged), ie with use in charge and then intensive discharge. With innovative GEL valve regulated technology and special plate design, the FPG Series ensure higher cyclic performance and higher recovery capability after deep discharge than cyclic AGM batteries.

## GENERAL INFORMATIONS

- Use: cyclic use
- Technology: GEL (VRLA)
- Available voltage: 12V
- Capacities from 26Ah to 200Ah
- Cycle life:
  - Up to 550 cycles at 100% DOD\* (50% capacity @20°C)
  - Up to 1100 cycles at 50% DOD\* (50% capacity @20°C)
- Case material: ABS UL94-HB



NON-SPILLABLE



## FEATURES

- Maintenance free & non-spillable
- High cyclic performances: x3 compared to AGM standard batteries
- High recovery from deep discharge
- Very low self-discharge rate (about 2% per month at 20°C)
- Wide range of operating temperatures - superior to AGM
- Higher operating temperature & depth of discharge: ideal in harsh conditions
- Operation in any orientation (excluding continuous inverted use)
- Rugged impact resistance
- No electrolyte stratification phenomenon
- Low gas emission due to high gas recombination of 99% (VRLA)

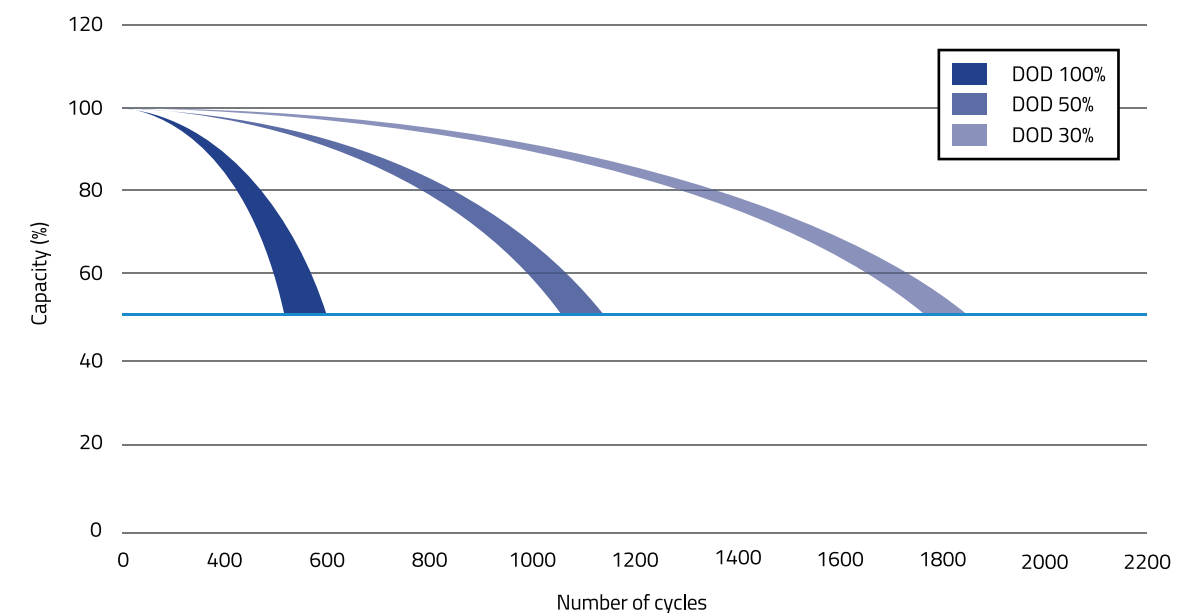


## APPLICATIONS



Fulbat designation	Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
				L	W	H	Total height			
FPG12-26	12	26	24.2	166	175	125	125	8.5	T12	2
FPG12-31	12	31	27.6	195	130	164	178	10.2	T6	1
FPG12-40	12	40	35	197	165	170	170	13.2	T6	2
FPG12-50	12	50	46.5	229	138	205	211	16.6	T6	1
FPG12-60	12	60	55	260	168	173	179	19.5	T6	1
FPG12-70	12	70	64.6	260	168	208	214	24.5	T6	1
FPG12-85	12	85	80	306	168	208	214	26.5	T6	1
FPG12-90 (L5)	12	90	84	353	175	190	190	26.2	Auto	2
FPG12-100	12	100	90	330	173	212	218	30.8	T11	1
FPG12-130	12	130	125	345	172	274	280	43.9	T11	1
FPG12-140	12	140	135	483	170	238.5	238.5	47.3	T11	1
FPG12-200	12	200	190	522	240	218	224	62.5	T11	3

## CYCLE LIFE



## PACKAGING

- Are delivered in color box:
  - FPG12-26
  - FPG12-31



\*Terminals / Layout p.14



# HIGH CYCLIC LiFePO4 RANGE

High performance & light weight



FLP Series are Lithium Iron Phosphate (LiFePO4) batteries specially designed to replace lead acid batteries thanks to their standard size cases and their similar charging voltage.  
The FLP Series offer many advantages compared to lead acid in terms of weight, cyclic performance, safety and power.

## GENERAL INFORMATIONS

- Use: cyclic use
- Technology: Lithium Iron Phosphate (LiFePO4)
- Available voltages: 6V - 12V
- Capacities from 6Ah to 200Ah
- Cycle life:
  - Up to 2000 cycles at 100% DOD\* (50% capacity @20°C)
  - Up to 4000 cycles at 80% DOD\* (50% capacity @20°C)
- Case material: ABS UL94-HB

*\*Depth Of Discharge*



## FEATURES

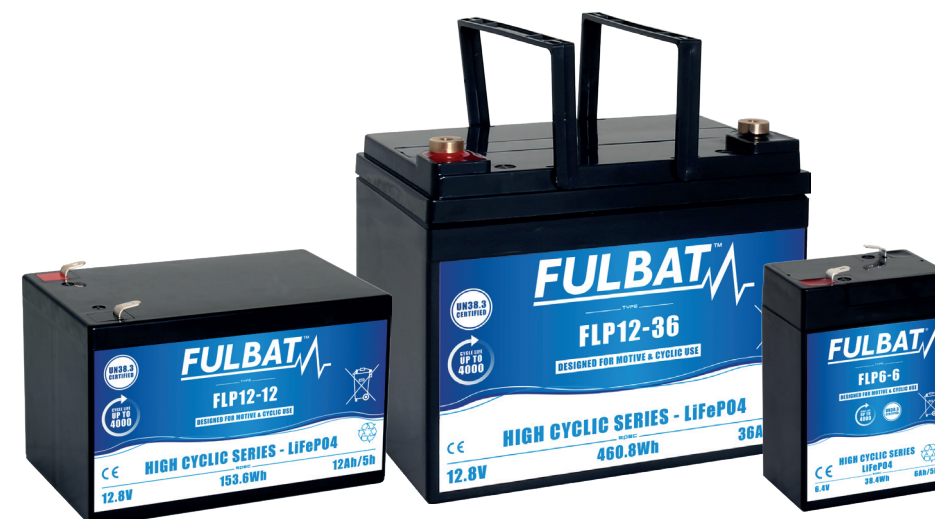
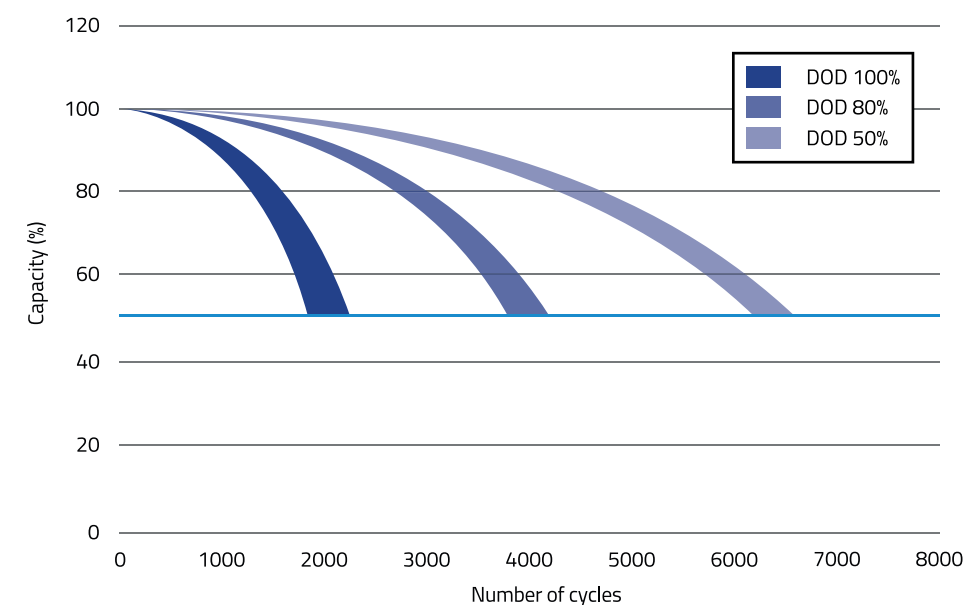
- High cyclic performances: x10 compared to AGM standard batteries
- Lighter weight: 60% lighter than lead acid battery
- Very high recovery from deep discharge – up to 100% DOD (vs 50% to 80% for AGM)
- Very high charge and discharge current accepted (to 10 times faster than lead acid batteries)
- Protection circuit integrated (PCM): overcharge protection, overdischarge protection, temperature protection & balancing function
- Wide range of operating temperatures: from -20°C to +60°C
- Safety: non-spillable, no acid in the battery, no risk of explosion, no gas emission
- Operation in any orientation
- PSOC: Partial State Of Charge accepted
- Low self-discharge rate (about 3% per month at 20°C)
- Can be charged with a standard lead acid charger (without desulphation step)
- Power and volume ratio yielding unrivalled energy density

## APPLICATIONS



Fulbat designation	Technology	Voltage (V)	Capacity Ah (5Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
				L	W	H	Total height			
FLP6-6	LiFePO4	6.4	6	70	47	101	105	0.35	T2	5
FLP12-9	LiFePO4	12.8	9	151	65	94	99	1.10	T2	4
FLP12-12	LiFePO4	12.8	12	151	98	95	100	1.68	T2	4
FLP12-24	LiFePO4	12.8	24	181	77	167	167	2.90	T12	2
FLP12-36	LiFePO4	12.8	36	195	130	162	162	4.20	T6	1
FLP12-40	LiFePO4	12.8	40	195	165	175	175	5.80	T6	2
FLP12-60	LiFePO4	12.8	60	229	138	217	217	9.50	T6	1
FLP12-100	LiFePO4	12.8	100	326	171.7	212	212	13.90	T11	1
FLP12-150	LiFePO4	12.8	150	483	170	238	238	20.20	T11	1
FLP12-200	LiFePO4	12.8	200	521	233	220	220	22.60	T11	1

## CYCLE LIFE

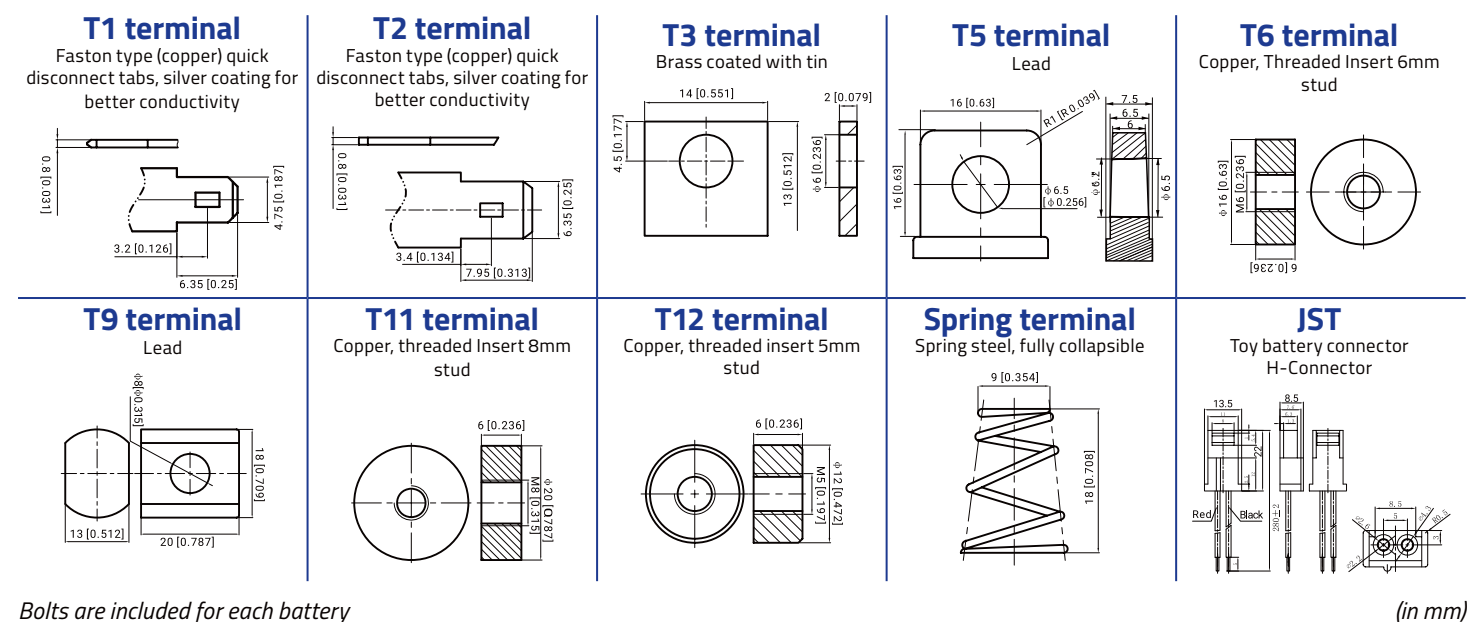


*\*Terminals / Layout p.14*



# TERMINALS & LAYOUTS RANGE

## TERMINALS DETAILS

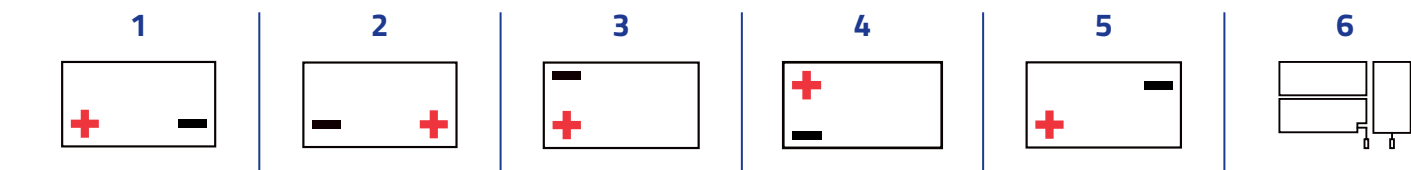


Bolts are included for each battery

## 3D TERMINALS



## LAYOUTS



## ACCESSORIES



# MAIN BATTERIES BY APPLICATION

SECURITY		Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
Fulbat designation	Technology				L	W	H	Total height			
FP12-1.2VdS	AGM	12	1.2	1.1	97	43	52	58	0.57	T1	3
FP12-2.3	AGM	12	2.3	2.1	178	35	60	66	0.97	T1	1
FP12-3.2VdS	AGM	12	3.2	3.0	134	67	59.5	65.5	1.35	T1	3
FP12-7.2	AGM	12	7.2	6.7	151	65	93.5	99.5	2.04	T1	4
FP12-12	AGM	12	12	11.2	151	98	95	101	3.24	T2	4
FP12-18	AGM	12	18	16.7	181.5	76.5	167.5	167.5	5.4	T12	2

UPS		Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
Fulbat designation	Technology				L	W	H	Total height			
FP6-7.2	AGM	6	7.2	6.7	150	34	94	100	1.07	T1	1
FP12-5.4	AGM	12	5.4	5.0	90	70	101	107	1.65	T2	1
FP12-5.5	AGM	12	5.5	4.7	151	53	93	99	1.75	T2 + T1	4
FP12-9	AGM	12	9	8.3	151	65	93.5	99.5	2.47	T2	4
FP12-18	AGM	12	18	16.7	181.5	76.5	167.5	167.5	5.4	T12	2

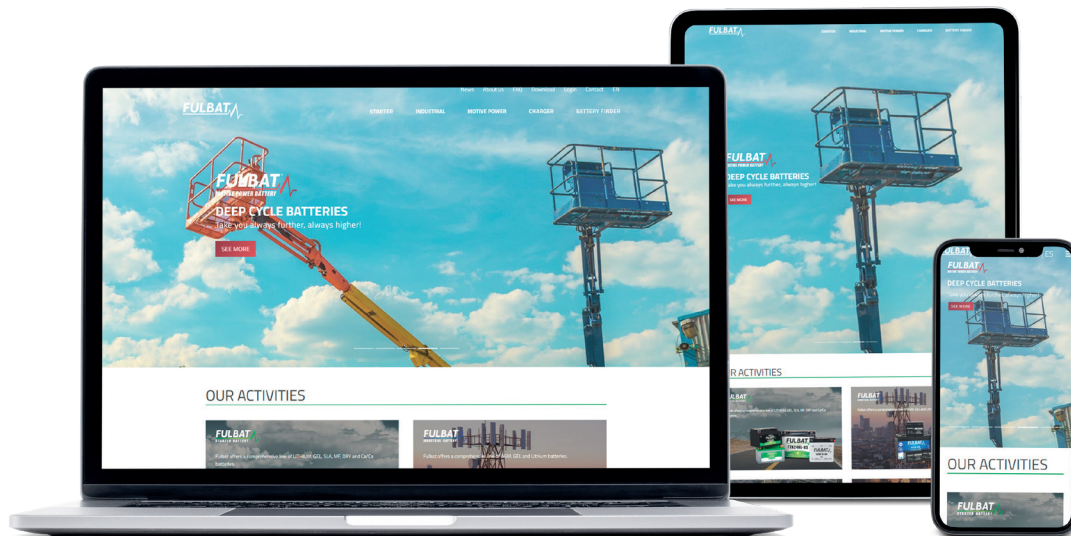
MEDICAL		Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
Fulbat designation	Technology				L	W	H	Total height			
FP6-1.2	AGM	6	1.2	1.1	97	24	51.5	57.5	0.29	T1	1
FP6-3.2	AGM	6	3.2	3.0	134	34	60	66	0.67	T1	1
FP6-4.5	AGM	6	4.5	4.2	70	47	100	106	0.81	T1	5
FP6-10	AGM	6	10	9.3	151	50.5	94	100	1.54	T1	1
FP12-1.2VdS	AGM	12	1.2	1.1	97	43	52	58	0.57	T1	3
FP12-2.3	AGM	12	2.3	2.1	178	35	60	66	0.97	T1	1
FP12-3.2VdS	AGM	12	3.2	3.0	134	67	59.5	65.5	1.35	T1	3
FP12-7.2	AGM	12	7.2	6.7	151	65	93.5	99.5	2.04	T1	4
FP12-18	AGM	12	18	16.7	181.5	76.5	167.5	167.5	5.4	T12	2

MOBILITY		Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
Fulbat designation	Technology				L	W	H	Total height			
FPC12-13	AGM	12	13.9	13	151	98	95	101	4.05	T2	4
FPC12-20	AGM	12	20	18	181.5	76.5	167.5	167.5	6	T12	2
FPC12-26	AGM	12	26	24.2	165	176	125	125	8.5	T12	2
FPC12-35	AGM	12	35.4	33	195	130	164	182	11.65	T5	1
FPC12-40	AGM	12	40.8	38	197	165	170	170	14.2	T12/T6	2
FPG12-31	GEL	12	31	27.6	195	130	164	178	10.2	T5	1
FPG12-40	GEL	12	40	35	197	165	170	170	13.2	T6	2
FPG12-50	GEL	12	50	46.5	229	138	205	211	16.6	T6	1
FPG12-70	GEL	12	70	64.6	260	168	208	230	24.5	T6	1
FLP12-12	LiFePO4	12.8	-	12 (5Hrs)	151	98	95	100	1.68	T2	4
FLP12-36	LiFePO4	12.8	-	36 (5Hrs)	195	130	162	162	4.2	T6	1
FLP12-40	LiFePO4	12.8	-	40 (5Hrs)	195	165	175	175	5.8	T6	2

GOLF CADDY		Voltage (V)	Capacity Ah (20Hr)	Capacity Ah (10Hr)	Dimensions mm (±2mm)				Net weight (kg)	Terminals*	Layout*
Fulbat Designation	Technology				L	W	H	Total height			
FPC12-20	AGM	12	20	18	181.5	76.5	167.5	167.5	6	T12	2
FPC12-26	AGM	12	26	24.2	165	176	125	125	8.5	T12	2
FPC12-35	AGM	12	35.4	33	195	130	164	182	11.65	T5	1
FPG12-26	GEL	12	26	24.2	166	175	125	125	8.5	T12	2
FPG12-31	GEL	12	31	27.6	195	130	164	178	10.2	T5	1
FLP12-36	LiFePO4	12.8	-	36 (5Hrs)	195	130	162	162	4.2	T6	1

\*Terminals / Layout p.14





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## DISCOVER FULBAT RANGES



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