MONBAT®
BATTERIES

COMPANY PRESENTATION

September 2021

COMPANY PROFILE

MONBAT GROUP

Foundation and brief history

1959 Established, state owned

1998 Privately owned at 100%

2000 Established export sales company "MONBAT Trading"

2001 First Recycling plant in Bulgaria

2006 IPO - 24% free float shares

2007 Acquisition of "START" battery company

2010 MONBAT RECYCLING plant in Romania

2011 MONBAT RECYCLING plant in Serbia

2017 MONBAT RECYCLING plant in Italy

Acquisition of "EAS Batteries GmbH" lithium ion cell manufacturer in Germany

2019 STC SRL – high-tech engineering business development

2021 SOCIETE NOUVELLE DES ACCUMULATEURS in Tunisia

MONBAT Group of Companies has the following major activities

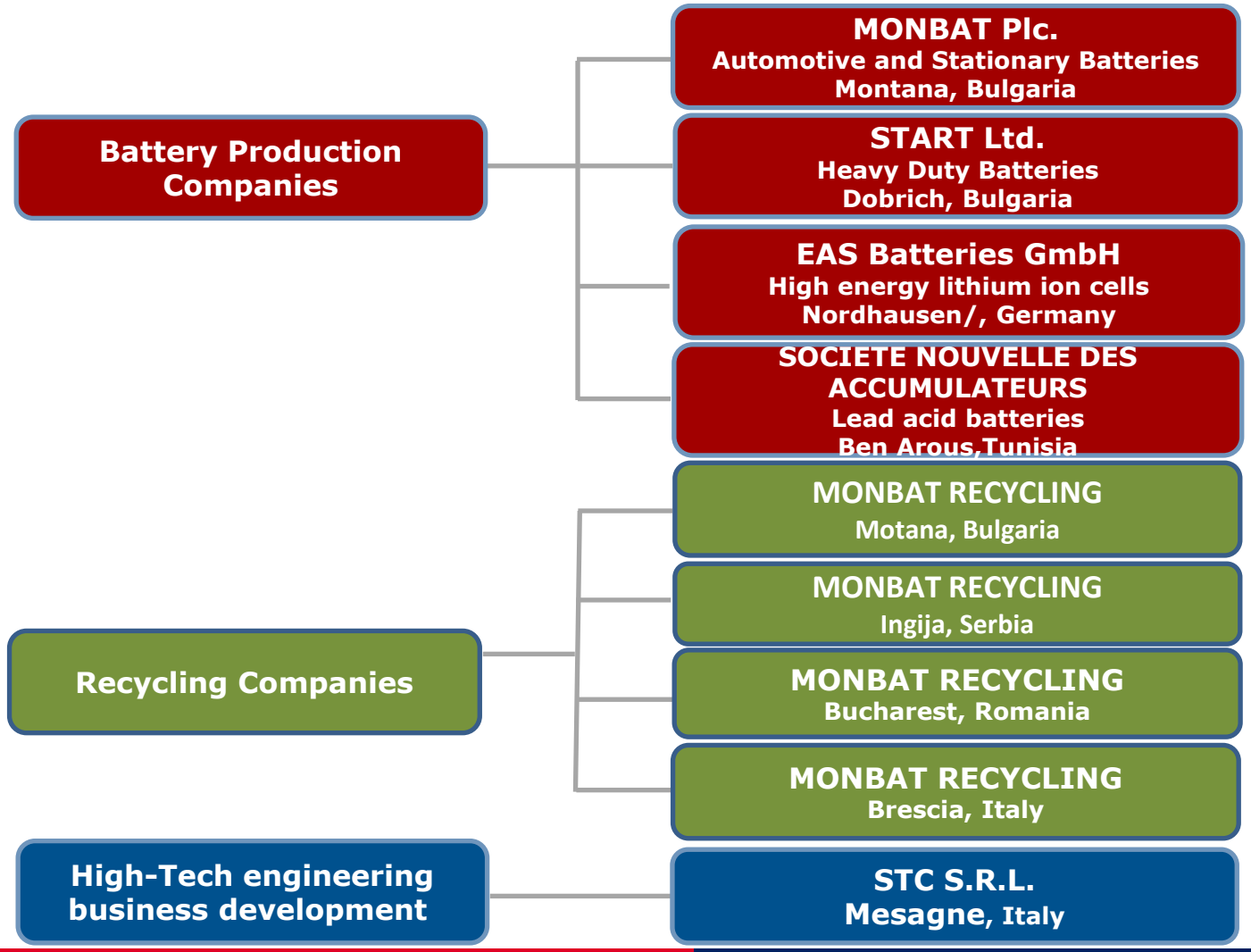
- Production and distribution of automotive and stationary batteries
- Recycling of all kinds of used lead-acid batteries

MONBAT Group operates globally and 95% of the sales come from outside Bulgaria

MONBAT GROUP OF COMPANIES STRUCTURE

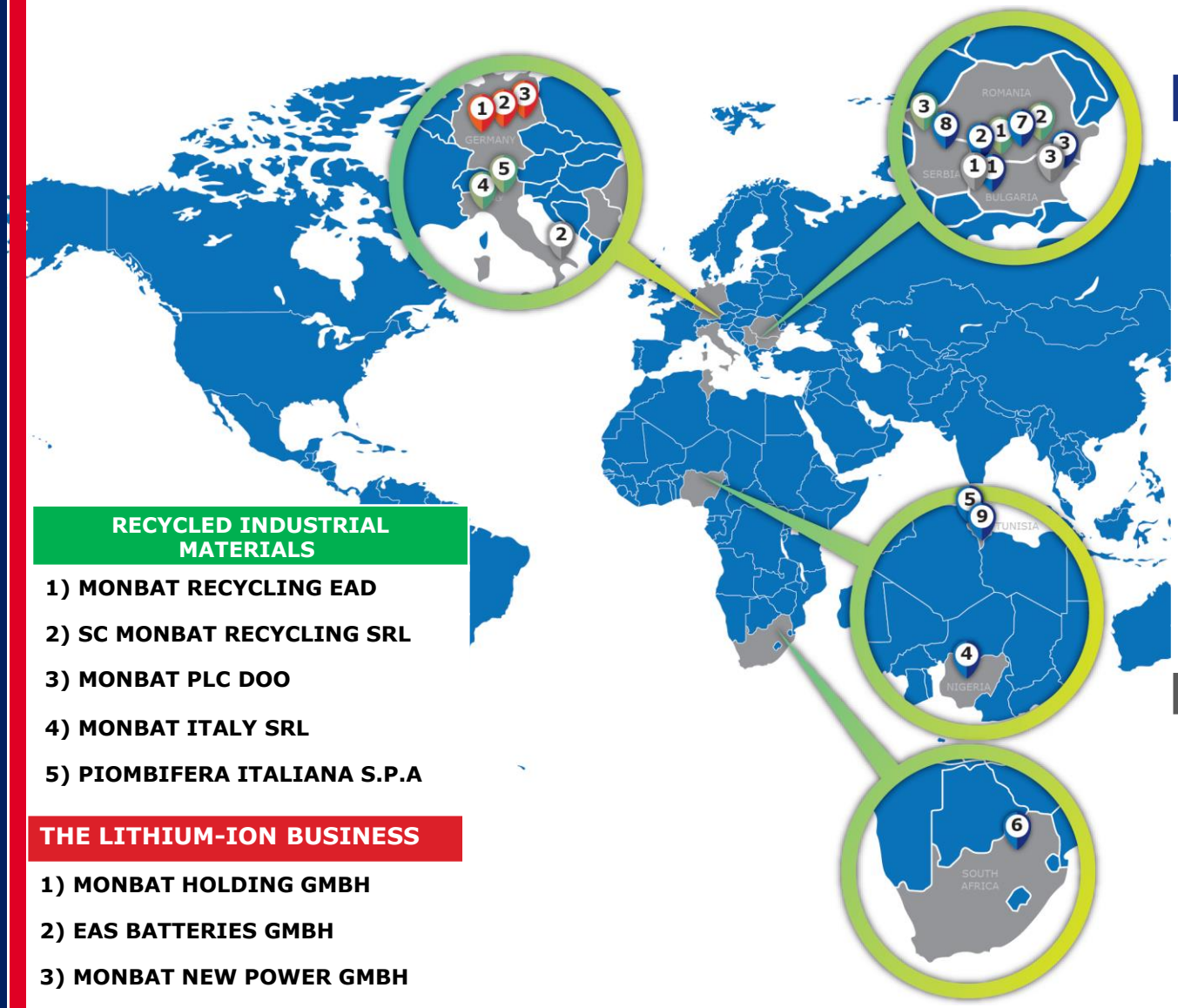
MONBAT GROUP

MONBAT GROUP OF COMPANIES HAS EIGHT MANUFACTURING FACILITIES



PRODUCTION AND RECYCLING PLANTS

MONBAT GROUP



RECYCLED INDUSTRIAL MATERIALS

1) MONBAT RECYCLING EAD
2) SC MONBAT RECYCLING SRL
3) MONBAT PLC DOO
4) MONBAT ITALY SRL
5) PIOMBIFERA ITALIANA S.P.A

THE LITHIUM-ION BUSINESS

1) MONBAT HOLDING GMBH
2) EAS BATTERIES GMBH
3) MONBAT NEW POWER GMBH

THE LEAD-ACID BUSINESS

1) MONBAT TRADING OOD
2) MONBAT AD
3) START AD
4) ENERGY BATTERIES NIGERIA LIMITED
5) SOCIETE NOUVELLE DES ACCUMULATEURS
6) MONBAT SOUTH AFRICA PROPRIETARY LTD
7) MONBAT ROMANIA SRL
8) YU MONBAT DOO
9) SOCIETE NOUR DE DISTRIBUTION

OTHER ACTIVITIES

1) MONBAT SPED EOOD
2) STC S.R.L.
3) A.R.T.MONBAT AD

FACTS AND FIGURES

MONBAT GROUP

157M EUR Group Turnover 2020

143M EUR Batteries Turnover 2020

5 000 000 SLI Batteries Capacity

500 000 AGM Batteries Capacity

1000+ Employees

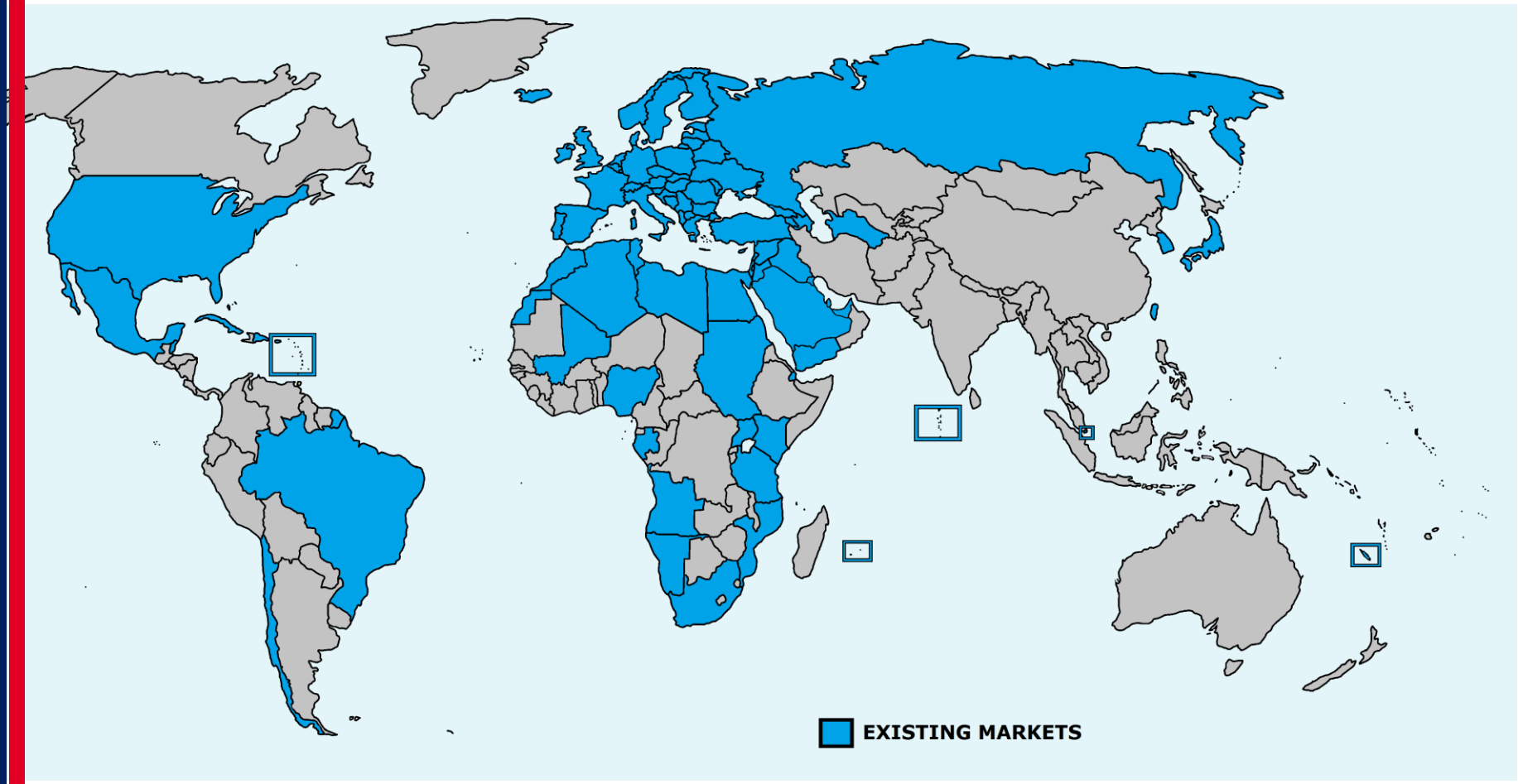
International Certificates

ISO 9001:2015	Quality Management
ISO 14001:2015	Environmental Management
OHSAS 18001:2007	Occupational Health and Safety
AQAP 2110	NATO Quality Compliance
IATF 16949:2016	OEM Quality Management

INTERNATIONAL SALES
80 countries

MONBAT GROUP

EXPORT – 95%
DOMESTIC – 5%



SCIENTIFIC APPROACH

MG LAB” laboratory is engaged in the testing and quality control of all lead-acid batteries, manufactured by MONBAT Group of companies.

Scientific Equipment:

- **Last generation of electrical test equipment**
- **State-of-art chemical testing equipment**
- **Facilities for physical tests**

Laboratory results recognized in the EU

MONBAT works in close cooperation with the Central Laboratory of Electrochemical Power Sources (CLEPS) of the Bulgarian Academy of Science.

BATTERY PORTFOLIO

MONBAT GROUP

Stationary Batteries

- Valve-regulated lead-acid (VRLA-AGM) batteries
- Long life 2-12V batteries with capacities from 50 to 600A
- Applications include telecommunications, uninterruptable power supply (UPS), solar energy and high temperature environments

Starter Batteries

- Lead-acid starter batteries including enhanced flooded (EFB), valve-regulated and absorbent glass matt (AGM) batteries
- Applications in passenger and commercial vehicles, heavy trucks and agricultural machines, operating in normal and harsh conditions

Semi-Traction Batteries

- Primarily comprises of semi-traction batteries for caravans, boats, golf carts, lawn mowers and other transportation applications
- A small proportion of Specialised batteries comprise of batteries for military applications, suitable for both Russian and NATO designed tanks and armoured vehicles

REFERENCE LIST FOR AUTOMOTIVE BATTERIES

MONBAT GROUP

OEM

Great Wall

Litex Motors, Bulgaria
DIN and JIS Types SLI
DIN L3 AGM

Minsk Automobile Plant, Belarus
Heavy Duty Batteries SLI

BELARUS MINSK TRACTOR WORKS

Minsk Tractor Works, Belarus
Light Commercial Vehicles SLI

YANMAR

Yanmar Construction
Equipment Europe
DIN and JIS SLI types

DENNIS EAGLE

Dennis Eagle UK
Heavy Duty Batteries SLI

ALEXANDER DENNIS

Alexander Dennis UK
Heavy Duty Batteries,
AGM Heavy Duty
Batteries

OES

Mercedes-Benz

Trucks and Buses, Cairo, Egypt
Heavy Duty Batteries SLI

TOYOTA TSUSHO

SLI batteries
AGM Stop/Start

REFERENCE LIST FOR STATIONARY BATTERIES

MONBAT GROUP

OEM Radio Vendors

ERICSSON

HUAWEI

NOKIA

ZTE中兴

MOTOROLA

OEM PSU Manufacturers

ELTEK always on

EMERSON Network Power

AEG POWER SOLUTIONS

DELTA

OMICRON GROUP

Telecommunication companies

Fixed and mobile network

VIVACOM

tel TELEKOM AUSTRIA GROUP

telenor

МЕГАФОН

MTC

КИЇВСТАР

УКРТЕЛЕКОМ

sopra steria

TELE2

OPERATOR NAȚIONAL MOLDTELECOM

lattelecom

life:) (ASTELIT)

ROMTELECOM

COSMOTE

vodafone Vodafone Group (Vodacom incl.)

Telefónica

VimpelCom

orange

MTN

STC الاتصالات السعودية

etisalat

TeliaSonera

ooredoo

avea AVEA Turkey

zain

Three.ie

TIM Telecom Italia Group

WIND

Telekom Srbija

NETIA

T-Mobile

and more . . .

AUTOMOTIVE BATTERY RANGES

MONBAT GROUP

AGM SERIES

LIFE EXPECTANCY	START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★★	HIGHLY RECOMMEND	★★★★★	★★★★★	★★★★★	EXTREMELY LOW

EFB SERIES

LIFE EXPECTANCY	START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★★	RECOMMEND	★★★★	★★★★	★★★★	VERY LOW

PREMIUM SERIES

LIFE EXPECTANCY	START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★	NOT RECOMMEND	★★★★	★★★	★★★★	VERY LOW

FORMULA SERIES

LIFE EXPECTANCY	START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★	NOT RECOMMEND	★★★	★★★	★★★	VERY LOW

Dynamic SERIES

LIFE EXPECTANCY	START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★	NOT RECOMMEND	★★	★★	★★	VERY LOW

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

AGM START/STOP

START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
HIGHLY RECOMMEND	★★★★★	★★★★★	★★★★★	EXTREMELY LOW

ADVANTAGES OF THE SERIES

- Latest AGM technology
- Excellent for advanced Start/Stop systems with regenerative braking
- Absolutely maintenance-free, leakage, spill and vibration proof
- Designed for extreme power demands
- Optimum starting power and maximum capacity
- High cycling durability
- Flexible installation and safe handling
- Reducing the fuel consumption and CO2 emissions
- Extra long service life

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level	Micro-cycle performance
W5	C2	V3	E3	M3

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
560 901 064	60	640	L2	242	175	190	0	⊖ ⊕	1	B13
570 901 076	70	760	L3	278	175	190	0	⊖ ⊕	1	B13
580 901 084	80	840	L4	310	175	190	0	⊖ ⊕	1	B13
595 901 086	95	860	L5	353	175	190	0	⊖ ⊕	1	B13

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

EFB START/STOP

RECOMMEND	★★★★	★★★★	★★★★	VERY LOW
START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION

ADVANTAGES OF THE SERIES

- ❑ **Improved EFB technology**
- ❑ **Excellent for standard Stop-Start systems**
- ❑ **Supports extended engine-off periods**
- ❑ **High starting power**
- ❑ **High cycling performance**
- ❑ **Improved charge acceptance**
- ❑ **Improved vibration resistance**
- ❑ **Sealed maintenance free**
- ❑ **Long service life and reliability**

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level	Micro-cycle performance
W4	C2	V2	E2	M2

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
560 002 056	60	560	L2	242	175	190	0	⊖ ⊕	1	B13
570 002 068	70	680	L3	278	175	190	0	⊖ ⊕	1	B13
580 002 074	80	740	L4	310	175	190	0	⊖ ⊕	1	B13
590 002 084	90	840	L5	353	175	190	0	⊖ ⊕	1	B13

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

EFB START/STOP JIS

NEW

RECOMMEND	★★★★	★★★★	★★★★	VERY LOW
START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION

ADVANTAGES OF THE SERIES

- ❑ Improved EFB technology
- ❑ Excellent for standard Stop-Start systems for Asian vehicles
- ❑ High starting power
- ❑ High cycling performance
- ❑ Improved charge acceptance
- ❑ Sealed maintenance free
- ❑ Long service life and reliability

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level	Micro-cycle performance
W4	C2	V2	E2	M2

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
565 002 056 SMF	65	560	D23	230	170	220	0	⊖ ⊕	1	B1
565 003 056 SMF	65	560		230	170	220	1	⊕ ⊖	1	B1
572 002 068 SMF	72	680	D26	260	170	220	0	⊖ ⊕	1	B1
585 002 074 SMF	85	740	D31	304	173	220	0	⊖ ⊕	1	B1

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

PREMIUM

START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
NOT RECOMMENDED	★★★★	★★★	★★★★	VERY LOW

ADVANTAGES OF THE SERIES

- ❑ Premium battery option on the market
- ❑ Punched grid technology for improved performance
- ❑ Up to +30% increased starting power
- ❑ Special fleece increases the cycling ability
- ❑ Ideal for cars with the latest electrical equipment
- ❑ Charge level indicator
- ❑ Increased service life
- ❑ Designed specially to withstand extreme climate conditions (heat proof)
- ❑ Enhanced safety and reliability

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V2	E2

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
553 027 050 SMF	53	500	LB1	207	175	175	0		1	B13
556 113 056 SMF	56	560	L1	207	175	190	0		1	B13
563 078 060 SMF	63	600	LB2	242	175	175	0		1	B13
566 019 066 SMF	66	660	L2	242	175	190	0		1	B13
575 083 072 SMF	75	720	LB3	278	175	175	0		1	B13
580 043 076 SMF	80	760	L3	278	175	190	0		1	B13
590 046 082 SMF	90	820	L4	310	175	190	0		1	B13
600 044 092 SMF	100	920	L5	353	175	190	0		1	B13

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

PREMIUM ASIA

NEW

START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
NOT RECOMMENDED	★★★★	★★★	★★★★	VERY LOW

ADVANTAGES OF THE SERIES

- ❑ Premium battery option on the market
- ❑ Punched grid technology for improved performance
- ❑ Up to +30% increased starting power
- ❑ Special fleece increases the cycling ability
- ❑ Ideal for Asian vehicles with the latest electrical equipment
- ❑ Charge level indicator
- ❑ Designed specially to withstand extreme climate conditions (heat proof)
- ❑ Enhanced service life and reliability

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V2	E2

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
545 090 033 SMF	45	330	B19	197	128	220	0		3	B1
545 091 033 SMF	45	330	B19	197	128	220	1		3	B1
550 053 040 SMF	50	400	B24	237	128	220	0		3	B0
550 055 040 SMF	50	400	B24	237	128	220	1		3	B0
565 027 060 SMF	65	600	D23	230	170	220	0		1	B1
565 028 060 SMF	65	600	D23	230	170	220	1		1	B1
575 027 070 SMF	75	700	D26	260	170	220	0		1	B1
575 028 070 SMF	75	700	D26	260	170	220	1		1	B1
600 032 082 SMF	100	820	D31	304	173	220	0		1	B1
600 033 082 SMF	100	820	D31	304	173	220	1		1	B1

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

FORMULA

START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
NOT RECOMMENDED	★★★	★★★	★★★	VERY LOW

ADVANTAGES OF THE SERIES

- ❑ Formula for all classes of vehicles
- ❑ Suitable for advanced level of electrical equipment
- ❑ Charge level indicator
- ❑ Guaranteed start at extreme temperatures
- ❑ Enhanced safety, leakage and spill proof
- ❑ Improved service life
- ❑ Higher reliability

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V1	E1

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
550 027 042 SMF	50	420	L1	207	175	190	0	⊖ ⊕	1	B13
560 077 054 SMF	60	540	LB2	242	175	175	0	⊖ ⊕	1	B4
565 019 058 SMF	65	580	L2	242	175	190	0	⊖ ⊕	1	B13
575 046 068 SMF	75	680	LB3	278	175	175	0	⊖ ⊕	1	B4
580 043 072 SMF	80	720	L3	278	175	190	0	⊖ ⊕	1	B13
580 045 072 SMF	80	720	LB4	310	175	175	0	⊖ ⊕	1	B4
585 046 075 SMF	85	750	L4	310	175	190	0	⊖ ⊕	1	B13
595 021 080 SMF	95	800	LB5	353	175	175	0	⊖ ⊕	1	B4
600 044 084 SMF	100	840	L5	353	175	190	0	⊖ ⊕	1	B13

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

FORMULA ASIA

NOT RECOMMENDED	★★★	★★★	★★★	VERY LOW
START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION

ADVANTAGES OF THE SERIES

- ❑ Best formula for Asian vehicles
- ❑ Suitable for advanced level of electrical equipment
- ❑ Charge level indicator
- ❑ Suitable for vehicles with high level of electrical demand
- ❑ Guaranteed start at extreme temperatures
- ❑ Enhanced safety, leakage and spill proof
- ❑ Higher reliability

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V1	E1

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics		
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout	Terminals	Hold Down
535 087 030 SMF	35	300	B19 / NS40	197	128	220	0	3	B1
535 020 030 SMF	35	300		197	128	220	0	3	B0
535 022 030 SMF	35	300		197	128	220	1	3	B0
545 084 033 SMF	45	330	B24 / NS60	237	128	220	0	3	B0
545 051 033 SMF	45	330		237	128	220	1	3	B0
560 068 045 SMF	60	450	D23	230	170	220	0	1	B1
560 069 045 SMF	60	450		230	170	220	1	1	B1
570 029 056 SMF	70	560	D26/N50	260	170	220	0	1	B1
570 024 056 SMF	70	560		260	170	220	1	1	B1
600 032 073 SMF	100	730	D31/N70	304	173	220	0	1	B1
600 033 073 SMF	100	730		304	173	220	1	1	B1

AUTOMOTIVE BATTERY RANGE

MONBAT GROUP

DYNAMIC

START/STOP SYSTEMS	EQUIPMENT LEVEL	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
NOT RECOMMENDED	★★	★★	★★	VERY LOW

ADVANTAGES OF THE SERIES

- ❑ Suitable for vehicles with standard level of electrical demand
- ❑ Integrated degassing Labyrinth system
- ❑ Lockable terminal protection caps
- ❑ Easy access to terminals for testing
- ❑ Enhanced safety, leakage and spill proof
- ❑ Long life in service

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W3	C2	V1	E1

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics		
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout	Terminals	Hold Down
544 119 035	44	350	L0	175	175	190	0	1	B13
540 046 032	40	320	LB1	207	175	175	0	1	B4
545 059 036	45	360	L1	207	175	190	0	1	B13
550 056 042	50	420	LB2	242	175	175	0	1	B4
555 059 048	55	480	L2	242	175	190	0	1	B13
566 038 058	66	580	L3	278	175	190	0	1	B13
570 014 064	70	640	LB3	278	175	175	0	1	B4
575 039 068	75	680	LB4	310	175	175	0	1	B4
580 042 072	80	720	L4	310	175	190	0	1	B13
585 104 070	85	700	LB5	353	175	175	0	1	B4
595 038 080	95	800	L5	353	175	190	0	1	B13

HEAVY-DUTY BATTERY RANGES

MONBAT® GROUP

AGM SERIES

VALUE FOR CUSTOMER	EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★★	★★★★	★★★	★★★★	★★★★★	EXTREMELY LOW

EFB SERIES

VALUE FOR CUSTOMER	EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★★	★★★★	★★★	★★★★	★★★★★	VERY LOW

SHD SERIES

VALUE FOR CUSTOMER	EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★	★★★	★★	★★★	★★★★	VERY LOW

SMF SERIES

VALUE FOR CUSTOMER	EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★	★★★	★★	★★★	★★★	LOW

HD SERIES

VALUE FOR CUSTOMER	EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★	★★	★★	★★	★★★	LOW

COMMERCIAL VEHICLE RANGE

MONBAT GROUP

AGM START/STOP

EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★★	★★★	★★★★★	★★★★★	EXTREMELY LOW

ADVANTAGES OF THE SERIES

- ❑ **Latest AGM technology**
- ❑ **High cycling durability**
- ❑ **Absolutely maintenance-free, leakage, spill and vibration proof**
- ❑ **Designed for extreme power demands**
- ❑ **Optimum starting power and maximum capacity**
- ❑ **Flexible installation and safe handling**
- ❑ **Reducing the fuel consumption and CO2 emissions**
- ❑ **Extremely long service life**

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W5	C2	V3/V4	E3

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
720 901 140	220	1400	C	514	274	242	3		1	B0

COMMERCIAL VEHICLE RANGE

MONBAT GROUP

EFB HEAVY-DUTY

EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★	★★★	★★★★	★★★★★	VERY LOW

ADVANTAGES OF THE SERIES

- ❑ New EFB technology with casted grids construction
- ❑ Excellent for vehicles with advanced electrical equipment
- ❑ Reliable energy supply also during extended engine-off periods
- ❑ High cycling performance @ 50% DOD
- ❑ Improved charge acceptance
- ❑ Improved vibration resistance V3 ideal for end-of-frame installation
- ❑ Extreme endurance
- ❑ Longer service life and extended warranty period

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V3	E3

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
685 002 110	185	1100	B	513	223	223	3		1	B0
735 002 125	235	1250	C	514	276	242	3		1	B0

COMMERCIAL VEHICLE RANGE

MONBAT GROUP

SUPER HEAVY DUTY

EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★	★★	★★★	★★★	LOW

ADVANTAGES OF THE SERIES

- ❑ **Sealed Maintenance Free**
- ❑ **Fiber Glass separator for superior cycling stability**
- ❑ **Formula for HGVs, buses, construction vehicles, delivery vehicles with tail-lift, agricultural vehicles, etc.**
- ❑ **Enhanced resistance to vibrations**
- ❑ **Improved safety and reliability**
- ❑ **Extended service life**
- ❑ **Low rate of self discharge**

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W3	C2	V2	E2

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
625 030 075	125	750	A	513	189	223	3		1	B0
640 020 085	140	850	A	513	189	223	3		1	B0
655 011 090	155	900	A	513	189	223	3		1	B0
655 013 090	155	900	B	513	223	223	3		1	B0
670 043 100	170	1000	B	513	223	223	3		1	B0
680 032 110	180	1100	B	513	223	223	3		1	B0
700 014 115	200	1150	C	514	276	242	3		1	B0
730 012 125	230	1250	C	514	276	242	3		1	B0

COMMERCIAL VEHICLE RANGE

MONBAT GROUP

SMF HEAVY-DUTY

EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★	★★	★★★	★★★★	VERY LOW

ADVANTAGES OF THE SERIES

- ❑ Sealed Maintenance Free
- ❑ Advanced labyrinth system for recombination of gases and reduced water loss
- ❑ High Endurance
- ❑ Enhanced Safety
- ❑ Longer Service Life compared to conventional batteries
- ❑ Low rate of self discharge
- ❑ Ideal for H.G.V., Coaches and buses with the latest electrical equipment

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V2	E1

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
610 102 080 SMF	110	800	GR31	336	173	235	9		1	B0
610 103 080 SMF	110	800	GR31	336	173	235	9		8	B0
620 102 085 SMF	120	850	GR31	336	173	235	9		1	B0
620 103 085 SMF	120	850	GR31	336	173	235	9		8	B0
625 030 080 SMF	125	800	A	513	189	223	3		1	B0
640 020 090 SMF	140	900	A	513	189	223	3		1	B0
655 013 095 SMF	155	950	A	513	189	223	3		1	B0
670 043 105 SMF	170	1050	B	513	223	223	3		1	B0
680 032 115 SMF	180	1150	B	513	223	223	3		1	B0
680 031 115 SMF	180	1150	B	513	223	223	4		1	B0
700 014 120 SMF	200	1200	C	514	276	242	3		1	B0
700 015 120 SMF	200	1200	C	514	276	242	4		1	B0
730 012 130 SMF	230	1300	C	514	276	242	3		1	B0

COMMERCIAL VEHICLE RANGE

MONBAT GROUP

HEAVY DUTY

★★	★★	★★	★★★	LOW
EQUIPMENT LEVEL	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION

ADVANTAGES OF THE SERIES

- ❑ **Complete range for vans, agricultural vehicles, tractors, H.G.V., Coaches and buses**
- ❑ **Suitable for heavy vehicles with standard electrical requirements**
- ❑ **Wide range of available specifications**
- ❑ **Vibration proof**
- ❑ **Low rate of self discharge**
- ❑ **Improved endurance**
- ❑ **Enhanced safety and reliability**

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W3	C2	V2	E1

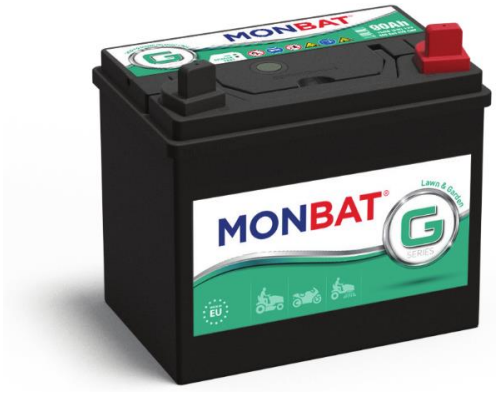
SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
595 016 065	95	650	Compact Low	345	175	230	0		1	B0
620 047 085	120	850	Compact Low	345	175	230	0		1	B0
630 012 084	130	840	Compact High	345	175	285	0		1	B0
625 030 080	125	800	A	513	189	220	3		1	B0
635 039 090	135	900	MAC 110	514	175	210	3		1	B3
640 020 090	140	900	A	513	189	220	3		1	B0
643 029 090	143	900	MAC 143	514	218	210	3		1	B3
670 043 105	170	1050	B	513	223	223	3		1	B0
680 032 115	180	1150	B	513	223	223	3		1	B0
700 014 120	200	1200	C	514	276	242	3		1	B0
730 012 130	230	1300	C	514	276	242	3		1	B0

LAWN AND GARDEN BATTERIES

MONBAT GROUP

GARDEN SERIES



★★★★	★★	★★★	★★★★	EXTREMELY LOW
VALUE FOR CUSTOMER	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION

ADVANTAGES OF THE SERIES

- ❑ **Completely maintenance free, no fill-up necessary**
- ❑ **Enhanced safety, leakage and spill proof**
- ❑ **Very high cranking performance**
- ❑ **Increased reliability**
- ❑ **High endurance**
- ❑ **Charge level indication**
- ❑ **100% European origin**

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W4	C2	V1	E1

SPECIFICATIONS

Battery Type	Performance		Box	Dimensions			Technical Characteristics			
	Capacity, Ah	CCA, A [EN]		L	W	H	Layout		Terminals	Hold Down
528 015 025 SMF	28	250	U1R-9	196	128	184	0		4	B0
528 016 025 SMF	28	250	U1R-9	196	128	184	1		4	B0
532 030 028 SMF	32	280	U1R-9	196	128	184	0		4	B0
532 034 028 SMF	32	280	U1R-9	196	128	184	1		4	B0

SPECIAL VEHICLES

MONBAT GROUP

NATO SERIES

ADVANTAGES OF THE SERIES

- ❑ High endurance and reliability
- ❑ Improved vibration resistance
- ❑ Low rate of self discharge
- ❑ Long service life
- ❑ Available in dry charged version

★★★★ ENDURANCE	★★ VIBRATION RESISTANCE	★★★ CYCLING CAPABILITY	★★★ CCA CAPABILITY	EXTREMELY LOW WATER CONSUMPTION

SPECIFICATIONS

Battery Classification as per EN 50342

Water consumption	Charge retention	Vibration resistance	Endurance Level
W3	C2	V1	E1

Battery Type	Nominal Voltage	Performance		Dimensions			Technical Characteristics			
		Capacity, Ah	CCA, A [EN]	L	W	H	Layout		Terminals	Hold Down
610 011 080	12 V	110	800	286	260	226	2		1	B0
625 023 085	12 V	125	850	286	260	226	2		1	B0

SPECIAL VEHICLES

MONBAT GROUP

ARMY POWER

ADVANTAGES OF THE SERIES

12V BATTERIES

Battery Type	Nominal Voltage	Performance		Reserve Capacity [min]	Dimensions		
		Capacity, Ah	CCA, A [EN]		L	W	H
MBL 6ST140PK	12V	140	420	270	570	243	238
MBL 6ST160PK	12V	160	480	290	570	243	238

24V BATTERIES

Battery Type	Nominal Voltage	Performance		Reserve Capacity [min]	Dimensions		
		Capacity, Ah	CCA, A [EN]		L	W	H
MBL 12ST85	24V	85	400	145	586	234	240

FOR RUSSIAN DESIGN TANKS AND ARMORED VEHICLES

MILITARY APPLICATION

MONBAT GROUP

AIR POWER SERIES

ENDURANCE	VIBRATION RESISTANCE	CYCLING CAPABILITY	CCA CAPABILITY	WATER CONSUMPTION
★★★★	★★	★★★	★★★	EXTREMELY LOW

ADVANTAGES OF THE SERIES

SPECIAL BATTERIES FOR HELICOPTERS AND AIRPLANES

- ❑**High endurance and reliability**
- ❑**Improved vibration resistance**
- ❑**Low rate of self discharge**
- ❑**Long service life**

APPLICATION

Helicopter type:
Mi 1 Hare, Mi 2 Hoplite, Mi 4 Hound, Mi 6 Hook, Mi 8 Hare/Hip, Mi 17 Hip, Mi 14 Haze, Mi 24 Hind, Mi 26, Mi 28, Mi 38

Aircraft type:
AN 2, AN 12, AN 24, AN 26, AN 30, AN 32, L 29, L 39, YAK 50, YAK 52

SPECIFICATIONS

Battery Type	Nominal Voltage	Performance		Dimensions		
		Capacity, C_{25} (Ah)	Max disch. current, A [EN]	L	W	H
MBL 12SAM28	24V	28	650	369	163	214
MBL 12SAM55	24V	55	1500	369	163	214

RAILWAY BATTERIES

MONBAT GROUP

RAILWAY

SPECIFICATIONS

APPLICATIONS:

- ❑ Locomotives Type:12 LDE 2100 (Romania)
- ❑ Locomotives Type: OVM 2 (Hungary)
- ❑ Locomotives Series: 06 (Bulgaria)
- ❑ Locomotives Series: 51 (Bulgaria)
- ❑ Locomotives Series: 55 (Bulgaria)

Type according to UIC 854-R	Nominal Voltage	Nominal Capacity, C_5 (Ah)	Dimensions		
			L	W	H
BS-4	12V	330	649	504	256

APPLICATIONS:

- ❑Locomotives Serie 06: 2 x 12 batteries
- ❑Locomotives Serie 07 (T3107): 3 x 8 batteries
- ❑Locomotives Serie 51: 2 x 12 batteries
- ❑Locomotives Serie 52: 9 batteries
- ❑Locomotives Serie 55: 2 x 8 batteries

Type according to UIC 854-R	Nominal Voltage	Nominal Capacity, C_5 (Ah)	Dimensions		
			L	W	H
BS-7	12V	165	513	223	223

DEEP CYCLE BATTERIES

MONBAT GROUP

MEGALIGHT POWER AGM DEEP CYCLE

ADVANTAGES OF THE RANGE

MEGALIGHT POWER RANGE FEATURES ADVANCED AGM TECHNOLOGY WITH ABSORBED ELECTROLYTE, DESIGNED FOR RELIABLE STORAGE SOLUTIONS AND RENEWABLE ENERGY APPLICATIONS.

- ❑ **100% non spillable, perfect for indoor usage**
- ❑ **More than 500 cycles at 75% D.O.D**
- ❑ **More than 1000 cycles according to IEC 61427 (PVES Application)**
- ❑ **Extremely long service life**
- ❑ **Absolutely maintenance free**
- ❑ **High reliability and safe handling**

DEEP CYCLE BATTERIES

MONBAT® GROUP

MEGALIGHT POWER AGM DEEP CYCLE

SPECIFICATIONS

Battery Type	Nominal Voltage [V]	C1 (10.2V) [Ah]	C5 (10.2V) [Ah]	C10 (10.2V) [Ah]	C100 (10.8 V) [Ah]	Reserve Capacity [min]	Dimensions, mm L / W / H			Layout
ML 81060	12	38	52	54	65	110	242	175	190	0
ML 81070	12	45	60	63	80	130	278	175	190	0
ML 81090	12	65	80	83	90	175	353	175	190	0
ML 1200C	12	65	80	85	100	180	345	175	230	0
ML 140A	12	85	110	125	140	240	513	189	223	3
ML 170B	12	100	130	145	170	300	513	223	223	3
ML 185C	12	115	150	165	195	350	518	274	242	3
ML 220C	12	135	175	190	220	430	518	274	242	3

Charging Type	Parameters / Limits
Charge with constant current	Current limit: 10-20% from C_{10} capacity rate
Charge with constant voltage	Voltage limit:14,1-15.0 V per block
Float charge voltage (cycling)	Float Voltage: 13.62V per block @ 20 °C
Temperature correction factor	0.018V per block / °C

DEEP CYCLE BATTERIES

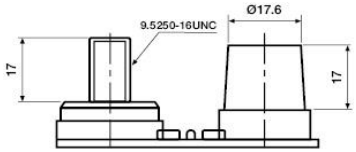
MONBAT GROUP

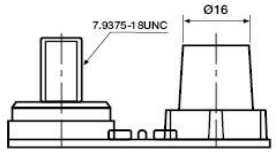
DEEP CYCLE SERIES

ADVANTAGES OF THE SERIES

OUR DEEP CYCLE RANGE IS SPECIALLY DESIGN FOR POWERING ELECTRICAL EQUIPMENT FOR LONGER PERIODS OF TIME WITH INCREASED ABILITY OF DEEP DISCHARGE CYCLES.

- ❑ Perfect option for applications demanding extremely high resistance to deep and repeated discharge cycles
- ❑ Up to 400 cycles at 75% D.O.D (for 12V batteries)
- ❑ Up to 1000 cycles at 75% D.O.D (for 6V and 8V)
- ❑ Up to 2000 cycles as per IEC 61427 (PVES applications)
- ❑ Very wide choice of capacities for any type of application





DEEP CYCLE BATTERIES

MONBAT GROUP

DEEP CYCLE SERIES

SPECIFICATIONS

Battery Type	Box type BCI	C20 [Ah]	C5 [Ah]	Reserve Capacity @25A[min]	Dimensions, mm L / W / H			Layout	Terminal type	Lid
6V Deep Cycle Flooded Batteries										
MP 6V US	GC2	225	185	450	261	181	274	2	Dual	FLAT
MP 6V	DIN	240	197	505	244	190	274	2	Dual	FLAT
MP 305	902	360	305	833	311	180	356	2	Dual	FLAT
8V Deep Cycle Flooded Batteries										
MP 8V US	GC8	175	145	302	261	181	276	0	Dual	FLAT
12V Deep Cycle Flooded Batteries										
MP 24DC	24	80	65	130	260	175	220	1	Dual	SMF
MP 27DC	27	95	75	170	304	173	220	1	Dual	SMF
MP 31DC	31	110	90	200	336	173	235	1	Dual	SMF
MP GC12	920	130	105	210	345	175	285	1	Dual	FLAT

DEEP CYCLE BATTERIES

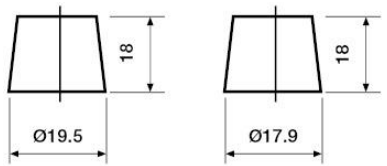
MONBAT GROUP

SEMI TRACTION

ADVANTAGES OF THE SERIES

OUR SEMI TRACTION RANGE IS SPECIALLY DESIGNED FOR APPLICATIONS WITH A PERMANENT AND LONG LASTING SUPPLY OF ELECTRICAL ENERGY.

- ❑ **Suitable for dual usage: power supply and starting power**
- ❑ **More than 400 cycles at 75% D.O.D.**
- ❑ **More than 800 cycles according to IEC 61427 (PVES Application)**
- ❑ **Long service life**
- ❑ **High resistance to deep and repeated discharge cycles**
- ❑ **Available in SMF version**



LEISURE/MARINE APPLICATION

MONBAT GROUP

LEISURE/MARINE

SPECIFICATIONS

- A specialized construction to withstand the discharge / charge cycling conditions demanded by leisure equipment
- To fit: Motorboats, Canal Boats, Yachts, Motor Homes, Caravans

Battery Type	Nominal Voltage [V]	Capacity [Ah]	Dimensions, [mm] L / W / H			Layout	Terminals	Hold Down
Leisure 60	12	60	270	175	210	1	1	B1/B5
Leisure 75	12	75	270	175	210	1	1	B1/B5
Leisure 90	12	90	345	175	230	1	1	B0
Leisure 100	12	100	345	175	230	1	1	B0
Leisure 110	12	110	345	175	230	1	1	B0
Leisure 130	12	130	345	175	285	1	1	B0

STATIONARY BATTERIES

MONBAT GROUP

VRLA-AGM

TELECOM AND INDUSTRIAL BATTERIES

Maintenance free product

Over 12 years of design life, EUROBAT specification Very Long Life

Nominal parameters in accordance with best practices

Bond container-lid: heat sealed for durable performance

AGM internal gas recombination efficiency 99%

Three-layer terminal sealing for leak-free operation

Shock-resistant ABS flame Retardant V0 containers

One way valve regulated system with flame-arrester

Unified sizes and integrated carry handles

Ready for use immediately after installation

Central degassing outlet for all front terminal batteries

Easy installation with insulated inter-cell connectors

Optimal correlation "electrolyte / active mass"

Fully recyclable

Proven low rate of self-discharge

Overall balance for float and cyclic application

Wide range of operating temperature -20°C / +55°C

ETSI 19" / 21" / 23" integration

Reduced installation and ownership cost

STATIONARY BATTERIES

MONBAT GROUP

STABLE GRID FLOATING

Front Terminal 12V

Top Terminal 2V/4V/6 V

TELECOM AND INDUSTRIAL BATTERIES

Battery Type	Nominal Voltage	Capacity C_{10}, Ah	Dimensions		
			L	W	H
12MVR65TA	12 V	60	395	105	255
12MVR80TA	12 V	80	395	105	255
12MVR100TA	12 V	92	395	105	280
12MVR100	12 V	100	398	110	285
12MVR110F	12 V	105	510	110	235
12MVR130L	12 V	130	555	125	280
12MVR150	12 V	150	550	110	285
12MVR155L	12 V	155	555	125	280
12MVR180	12 V	180	555	125	320
12MVR200	12 V	190	555	125	320

Battery Type	Nominal Voltage	Capacity C_{10}, Ah	Dimensions		
			L	W	H
2MVR400	2 V	414	389	171	238
2MVR500	2 V	518	389	171	238
2MVR600	2 V	621	389	171	238
4MVR300	4 V	311	389	171	238
6MVR200	6 V	207	389	171	238

STATIONARY BATTERIES

MONBAT GROUP

UNSTABLE GRID HIGH CYCLING

TELECOM AND INDUSTRIAL BATTERIES

Front Terminal 12V

Battery Type	Nominal Voltage	Capacity C_{10}, Ah	Dimensions		
			L	W	H
12HVR100	12 V	100	400	110	285
12HVR130	12 V	130	555	125	280
12HVR150	12 V	150	555	125	320
12HVR170	12 V	170	555	125	320

Top Terminal 2 V

Battery Type	Nominal Voltage	Capacity C_{10}, Ah	Dimensions		
			L	W	H
2HVR500	2 V	500	389	171	238

THANK YOU FOR YOUR ATTENTION!