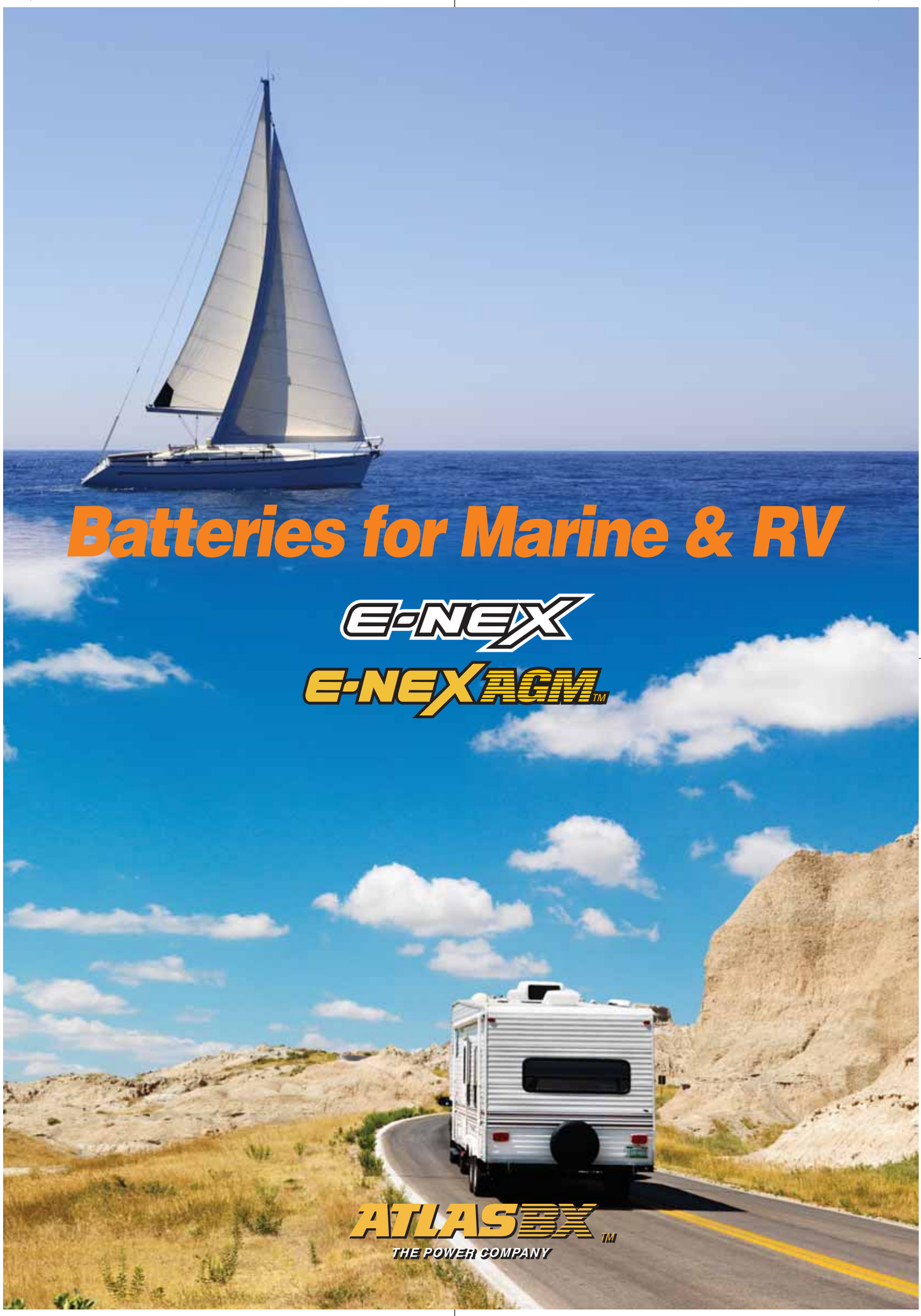

Batteries for Marine & RV
E-NEX
E-NEX AGM™
ATLAS BX™
THE POWER COMPANY

E-NEX Series
Technology

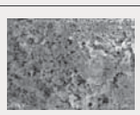
XDC Series Unique Construction Features & Benefits

Features	Benefits
Dual Purpose Plate(Starting & Deep Cycling) - X-Frame (Pos. / Neg.) - Special (Thicker) Plate with High Density Active Material - Calcium + High Tin Alloy - New Special Tissue **Vibration Resistant Design** - Low Resistance Enveloped Separator with Glass Mat - Hot Melt Glue - Reinforced Container	**Longer Life & High Cycle Stability** - High endurance in deep cycle service - Flexible design for semi-traction (deep cycling) and starting - Prevents internal short circuits - More electric power to terminal posts - The MF endurance by reserving more electrolyte volume over the plate **Minimal self-discharge : can be safely stored for longer** **Built strong to withstand the pounding and vibration of marine, 4WD and heavy vehicle use**

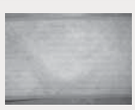
X-Frame (Pos. / Neg.)

Full Framed Grid (Round edge design)
- Full Framed Grid design restrains grid growth and short-circuits.
  Benefit : Upgraded quality and longer life span

Unique designed grid for electric flow
- As punching grids mechanically, it ensures high electric conductivities and strong adhesion of active materials.
  Benefit: Providing higher starting power, stable structure, and few corrosion.



Upgraded Active Material
- Provides high endurance in deep cycle service



Low Resistance Enveloped Separator with Glass Mat
- Prevents internal short circuits between positive and negative plates

Common Structure & Advantage (Marine & RV)

1. Convenience and stability

Ergonomically Designed Handle
- Provides an easy transportation and installation

Special Sealed Cover
- Protects the battery from acid leakage and minimizes gassing
- Frame arrestor prevents an inflow of outside spark

2. Excellent Performance

Hot Melt Glue to resist vibration
- Ensures resistance to outside impact and vibration, and minimizes loss of active materials

Magic Eye Indicator
- Easy to check Charging-State

Special Tissue
- Provides a mechanical support for adhesion of active material during the service

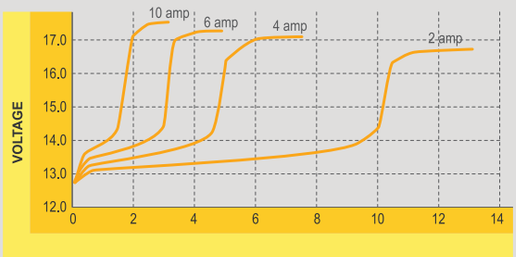
Marine Twin (Dual=SAE/Wing-Nut) Terminal
- Quick connection
- Compatibility with TOP POST and STUD

E-NEX Series

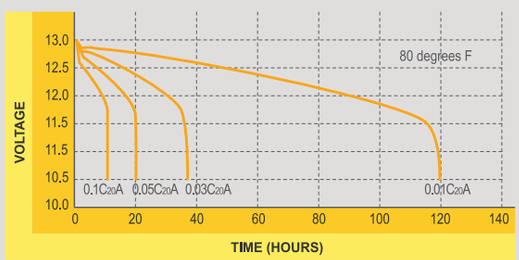
Charging instruction and H.U.P

Charge and Discharge Characteristics

Charge characteristics from 20% DOD, XDC31 MF



Disharge characteristics



Charging Method

※ Batteries should be recharged within 24 hours after each period of use.
※ Charging time by various charging rate can be determined by the SOC(state of charge)

Method 1 ; Constant Voltage Charge (Recommended Method)

Type	Voltage Setting
Daily Cycle Service	14.4~14.8
Floating Service	13.2~13.7
Equalizing	15.5

* Unit Average at 77℉ (25℃)

※ Every 30 to 90 days, conduct the equalizing charge.
Daily cycle service and deep discharging service need more frequent equalizing.

End of charge

- Current : below 1.0A during charge.
- Stabilized open circuit voltage : 12.75V or higher.

Method 2 ; Constant Current charge

Battery		XDC24MF	XDC27MF	XDC31MF
SOC	OCV	4.0A	4.5A	5.0A
100%	12.75V	-		
75%	12.40V	6hrs.		
50%	12.20V	12hrs.		
25%	12.00V	18hrs.		
0%	11.90V	24hrs.		

End of charge

- Maximum voltage output across the battery terminals is maintained at constant level for 2 hours during the charge.
- Stabilized open circuit voltage : 12.75V or higher.

Hours of Usable Power(H.U.P)			
Amp.Draw	5A	15A	25A
XDC24MF	15.4hrs.	4.3hrs.	2.4hrs.
XDC27MF	17.8hrs.	4.9hrs.	2.7hrs.
XDC31MF	20.0hrs.	5.6hrs.	3.1hrs.

E-NEX Series
Specification

XDC Series : Deep Cycle & Starting

Type No.	C20 (AH)	CA (32°F/0°C)	CCA (0°F/-18°C)	RC (Min)	Dimension(mm)				Layout	Terminal	Hold-down
					L	W	H	TH			
XDC24MF	80	625	500	140	257	172	200	220	FIG.1	MARINE TWIN	B1
XDC27MF	90	750	600	170	302	172	200	220	FIG.1	MARINE TWIN	B1
XDC31MF	100	810	650	180	330	172	218	242	FIG.3	MARINE TWIN*	B0

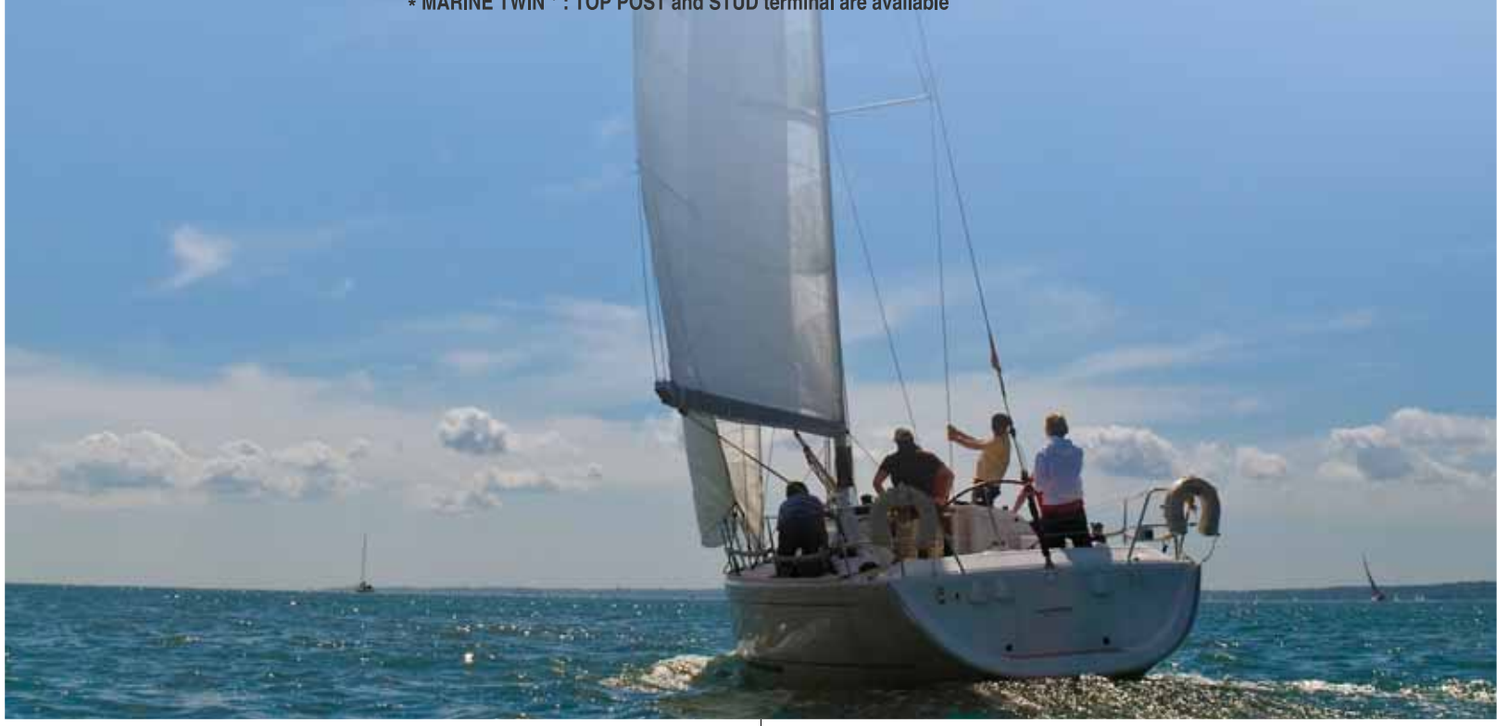
DC Series : Dual Purpose (Starting & Cycling)

Type No.	C20 (AH)	CA (32°F/0°C)	CCA (0°F/-18°C)	RC (Min)	Dimension(mm)				Layout	Terminal	Hold-down
					L	W	H	TH			
DC24MF	80	850	680	140	257	172	200	220	FIG.1	MARINE TWIN	B1
DC27MF	90	920	750	170	302	172	200	220	FIG.1	MARINE TWIN	B1
DC31MF	100	1000	800	180	330	172	218	242	FIG.3	MARINE TWIN*	B0

XV Series : Marine Starting

Type No.	Voltage [V]	CA (32°F/0°C)	CCA (0°F/-18°C)	RC (Min)	Dimension(mm)				Layout	Terminal	Hold-down
					L	W	H	TH			
MV24MF	12	700	560	105	257	172	200	220	FIG.1	MARINE TWIN	B1
CV24MF	12	750	600	125	257	172	200	220	FIG.1	MARINE TWIN	B1
XV24MF	12	900	720	140	257	172	200	220	FIG.1	MARINE TWIN	B1
XV27MF	12	900	720	160	302	172	200	220	FIG.1	MARINE TWIN	B1
XV30HMF	12	1000	800	180	325	172	200	220	FIG.1	MARINE TWIN	B1
XV31MF	12	1000	800	180	330	172	218	242	FIG.3	MARINE TWIN*	B0

* MARINE TWIN : STANDARD terminal is available
* MARINE TWIN * : TOP POST and STUD terminal are available



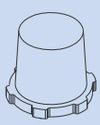
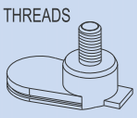
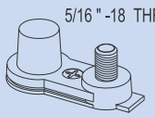
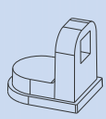
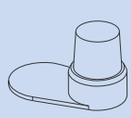
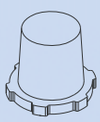
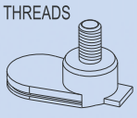
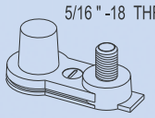
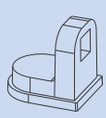
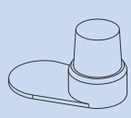
E-NEX Series

Specification, Terminal & Layout

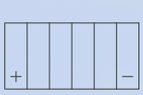
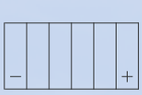
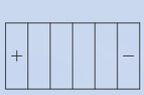
Lawn & Garden

Type No.	Voltage [V]	CA (32˚F/0˚C)	CCA (0˚F/-18˚C)	RC (Min)	Dimension(mm)				Layout	Terminal
					L	W	H	TH		
U1MF-H	12	235	190	27	205	132	160	185	FIG.1	U1 LUG
U1MF-S	12	310	250	32	205	132	160	185	FIG.1	U1 LUG
U1MF-X	12	375	300	40	205	132	160	185	FIG.1	U1 LUG
U1RMF-H	12	235	190	27	205	132	160	185	FIG.2	U1 LUG
U1RMF-S	12	310	250	32	205	132	160	185	FIG.2	U1 LUG
U1RMF-X	12	375	300	40	205	132	160	185	FIG.2	U1 LUG

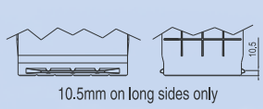
Terminal

	STANDARD	STUD	MARINE TWIN	U1 LUG	TOP POST
Positive Terminal		3/8 " -16 THREADS 	5/16 " -18 THREADS 		
Negative Terminal		3/8 " -16 THREADS 	5/16 " -18 THREADS 		

Layout

FIG. 1	FIG. 2	FIG. 3
		

Hold Down

B1	B13
 10.5mm on long sides only	5 notches  10.5mm on all four sides

* B0 : There is no hold-down

Marine & RV E-NEX AGM

Absoulte Power & Safety

AGM (Absorbent Glass Mat) Separator

- Minimized electric resistance, half of flooded battery
  - Provides outstanding cranking power, due to the enhanced ionic transfer
- No plate movement, completely spill and leak proof
  - Installation may be at any angle position, even horizontally

X-FRAME

- Full Frame with Stamped Grid Technology
  - Longer Life, Stabler Starting Power, and Stronger durability

UMF Ultra Micro Fiber

- Addition of fine fiber to active material
  - Increases performance rate of active material

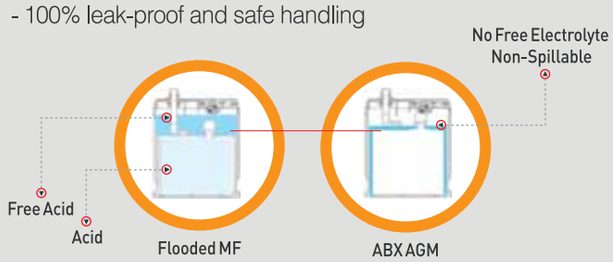
HDA High Density Active-Material

- High pressure of glass mat acting against the plate
  - Prevents from shedding of active material, as a result it ensures longer life

VRLA Sealed Construction advanced gas recombination Tech.

Valve Regulated Vent plug

- Enable to stable cranking power
- Provides constant partial pressure in each cell
- 100% leak-proof and safe handling



High Dimension of Grid Structure

- Provides more reaction surface area and increase of energy density

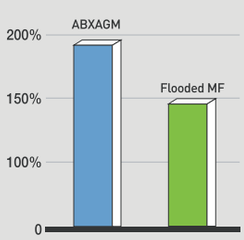
Starved Electrolyte Structure

- Increase of energy density, due to no free electrolyte

Benefits

High performance	Long life
- Excellent high rate discharge - Powerful cycle performance by high density active material	- Full Frame Stamped Grid with Ca-Sn alloy - Electrolyte density is stable - 2 times greater cycling ability over flooded moderate discharge levels

※ **Application: Marine & RV (Dual Purpose-Starting & Deep Cycle)**



[Deep cycle life : SAE J2185]

AGM for Marine & RV

GROUP NO.		Type No.	CCA (0℉/-18℃) (SAE)	CA (32℉/0℃) (SAE)	RC (Min)	C20 (AH)	Dimension(mm) L	W	H	TH	Layout	Terminal	Hold-down
BCI	24	AGM M24	750	900	140	75	257	172	200	220	FIG.1	MARINE TWIN	B1
	24R	AGM M24R	750	900	140	75	257	172	200	220	FIG.2	MARINE TWIN	B1
	31	AGM M31	800	960	180	90	330	172	218	242	FIG.3	STUD	B0

GROUP NO.		Type No.	CCA (EN)	C20 (AH)	Dimension(mm) L	W	H	TH	Layout	Terminal	Hold-down
DIN	L2	AGM L2	680	60	242	174	190	190	FIG. 2	STANDARD	B13
	L3	AGM L3	760	70	277	174	190	190	FIG. 2	STANDARD	B13
	L4	AGM L4	800	80	314	174	190	190	FIG. 2	STANDARD	B13
	L5	AGM L5	850	95	352	174	190	190	FIG. 2	STANDARD	B13

* **B0 : There is no hold-down**

Batteries for Marine & RV
Characteristics

The points of each Series

		AGM	Sealed Maintenance Free		
		Marine & RV AGM	XDC	DC	XV
Service		Deep Cycling & Starting (Semi-Traction)	Deep Cycling & Starting (Semi-Traction)	Starting+ Cycling	Starting+ Cycling
Grid	Positive	Pos. : X-Frame	Pos. : X-Frame	Pos. : X-Frame	Pos. : X-Frame
	Negative	Neg. : X-Frame	Neg. : X-Frame	Neg. : Expanded	Neg. : Expanded
Active Material		High density Active Material	High density Active Material	High density Active Material	Starting optimized Active Material
Separator		Absorbent Glass Mat	Low resistance Enveloped Separator with Glass Mat	Low resistance Enveloped Separator	Low resistance Enveloped Separator
Common Characteristic		Handle, Maintenance Free, Sealed Cover, Special Tissue (MF: Magic eye Indicator)			

The best choice of each Battery Rating Criteria

Battery Rating Criteria	AGM	XDC	DC	XV
Starting Service Capability	★★★★	★★	★★★	★★★
Dual Purpose Service Capability	★★★★	★★	★★★	–
Deep Cycle Service Capability	★★★★	★★★	★	–
Floating Service Capability	★★★★	★★★	★★	★
Maintenance Free	★★★★	★★★	★★★	★★★
Storage Ability	★★★★	★★★	★★★	★★★

Rating Scale : ★-Good ★★-Very Good ★★★-Excellent ★★★★-Best

Power Usage Comparison

Power Usage		Marine & RV AGM	XDC	DC	XV
Starting	Trolling/Stand-By				
Moderate	None	✓		✓	✓
Moderate	Moderate	✓	✓	✓	
Moderate	Heavy	✓	✓		
Heavy	None	✓		✓	
Heavy	Moderate	✓	✓	✓	✓
Heavy	Heavy	✓			

ATLASBX™

THE POWER COMPANY

SEOUL SALES OFFICE

14F, 5, Mabang-ro 10-gil, Seocho-gu, Seoul, Korea
TEL : +82-2-3498-0224/ 0183/ 0226/ 0223 FAX: +82-2-579-1050/ 1051 URL. www.atlasbx.com

CAT.NO.E-NEX-150209