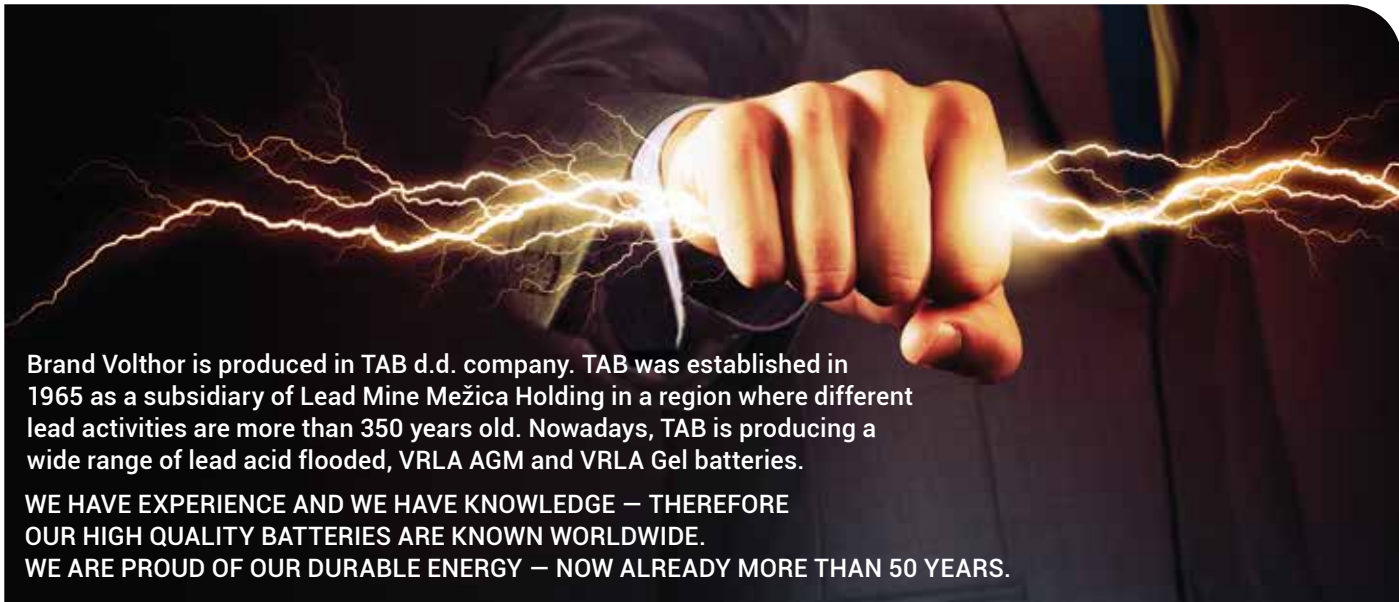


VOLTHOR STARTER BATTERIES



VolThor

VOLTHOR ULTRA
VOLTHOR SUPREME
VOLTHOR ULTRA TRUCK
VOLTHOR SUPREME TRUCK
VOLTHOR EFB Stop & Go
VOLTHOR AGM Stop & Go



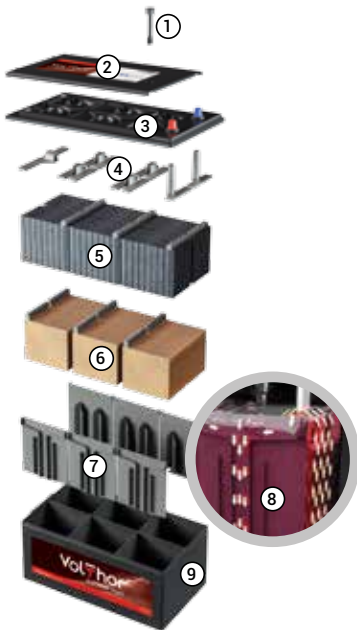
Brand Volthor is produced in TAB d.d. company. TAB was established in 1965 as a subsidiary of Lead Mine Mežica Holding in a region where different lead activities are more than 350 years old. Nowadays, TAB is producing a wide range of lead acid flooded, VRLA AGM and VRLA Gel batteries.

WE HAVE EXPERIENCE AND WE HAVE KNOWLEDGE – THEREFORE OUR HIGH QUALITY BATTERIES ARE KNOWN WORLDWIDE. WE ARE PROUD OF OUR DURABLE ENERGY – NOW ALREADY MORE THAN 50 YEARS.

TAB Tovarna Akumulatorskih Baterij d. d., Polena 6, SI-2392 Mežica, Slovenia | info@tab.si | +386 (0)2 8702 300 | www.tab.si

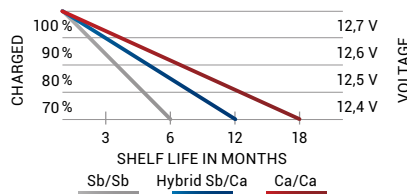
ENERGY IN MOTION

EMS TRUCK BATTERIES

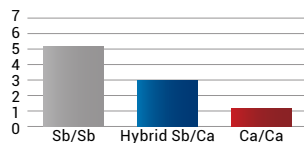


- 1 Electrolyte level indicator – Magic Eye
- 2 Top SMF lid with central degassing and flame arrestors (Battery manufactured by using Sb/Ca technology is fitted with a Flat lid with M27 plugs, for easy access)
- 3 Main SMF lid with labyrinth for additional safety and very low water loss
- 4 Robust plate connectors with large surface inter cell welds, increasing cranking power
- 5 Negative plate with additives for increased charging abilities. Permanent sulfation is severely restricted
- 6 Positive plates with thick casted grids. High-density active mass increases cycle life plus enhanced resistance to deep discharge
- 7 Integrated flexible ribs which generate adequate pressure to the plate stack in all states of charge
- 8 New cell design promotes acid motion in vertical direction, eliminating stratification
- 9 Impact resistant polypropylene container

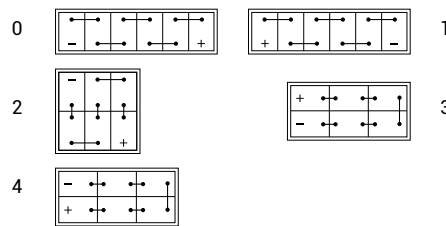
Allowable shelf life (SELFDISCHARGE)



Water consumption (g/Ah)



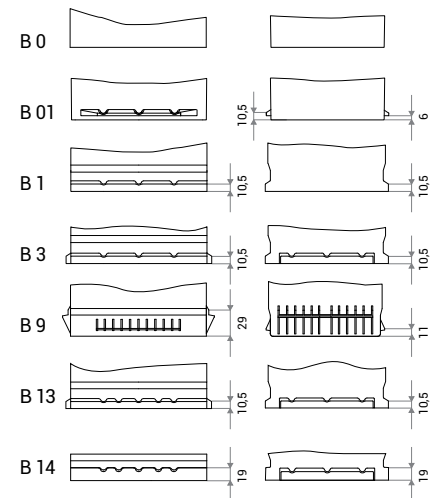
Layout



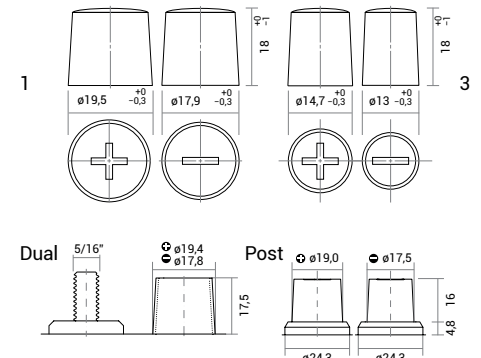
Glossary of remarks

- K** Kamina
- H** Handle
- KH** Kamina Handle
- ME** Magic Eye
- HD** Heavy Duty
- JIS** Japanese Poles
- SMF** Maintenance Free = Sealed
- DP** Dual Poles
- A** Pole Adapter
- AGM** Absorbed Glass Mat
- EMS** Electrolyte Mixing System

Base hold down



Terminals



VOLTHOR ULTRA is battery produced using Ca/Ca expanded metal technology designed for vehicles with entry level of electric equipment with demand of superior starting, performance and reliability. Volthor Ultra is real all rounder offering excellent power, capacity, cold start performance and reliability. SMF lid/cover provides complete roll over spill protection and is entirely maintenance free throughout the batteries life. This is high quality product for vehicles of every class.

- + High starting capabilities
- + Sealed cover construction
- + Explosion protection prevents flame brake-in into the battery
- + Reliable starting at extreme climatic conditions



VOLTHOR ULTRA

Flooded starter batteries, Ca/Ca technology | CAR batteries

ID Nr.	DIN marking	JIS marking (old/new)	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	L×W×H (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
301035	53520 SMF	NS40ZL SMF, 36B20L SMF	VU35J	35	53	53520	300	196×128×202/223	B0	0	9,4	96/128	SMF, H, JIS
301135	53522 SMF	NS40Z SMF, 36B20R SMF	VU35JX	35	53	53522	300	196×128×202/223	B0	1	9,4	96/128	SMF, H, JIS
301735	53521 SMF	NS40ZL SMF, 36B20L SMF	VU35JP	35	53	53520	300	196×134×202/223	B01	0	9,4	96/128	SMF, H, JIS
301045	54506		VU45	45	71	L0	400	175×175×190	B13	0	10,5	72/120	K
301036	53649 SMF		VU36	36	55	L1B	330	207×175×175	B13	0	10,2	80/120	SMF, H
301240	54002 SMF		VU40	40	62	L1B	360	207×175×175	B13	0	10,6	72/120	SMF, H
301340	54003 SMF		VU40X	40	62	L1B	360	207×175×175	B13	1	10,6	72/120	SMF, H
301245	54502 SMF		VU45B	45	71	L1B	420	207×175×175	B13	0	11,3	72/120	SMF, H
301046	54559 SMF		VU45H	45	71	L1	400	207×175×190	B13	0	11,7	72/100	SMF, H
301050	55010 SMF		VU50H	50	81	L1	450	207×175×190	B13	0	12,2	72/100	SMF, H
301645	54520 SMF	NS60LS BHD	VU45J	45	71	53520	400	196×134×202/223	B01	0	10,6	72/96	SMF, H, JIS
301145	54522 SMF	NS60S BHD	VU45JX	45	71	53522	400	196×134×202/223	B01	1	10,6	72/96	SMF, H, JIS
301246	54523/84 SMF	NS60LS SMF, 46B24LS SMF	VU45JA	45	71	54523/84	400	236×128×202/223	B0	0	11,9	72/96	SMF, H, JIS, A
301146	54524/51 SMF	NS60S SMF, 46B24RS SMF	VU45JAX	45	71	54524/51	400	236×128×202/223	B0	1	11,9	72/96	SMF, H, JIS, A
301055	55523/84 SMF		VU55JA	55	90	54523/84	540	236×128×202/223	B0	0	13,5	72/96	SMF, H, JIS, A
301155	55524/51 SMF		VU55JAX	55	90	54524/51	540	236×128×202/223	B0	1	13,5	72/96	SMF, H, JIS, A
301450	55001 SMF		VU50	50	81	L2B	450	242×175×175	B13	0	12,8	63/108	SMF, H
301255	55509 SMF		VU55	55	90	L2B	500	242×175×175	B13	0	13,3	63/108	SMF, H
301060	56009 SMF		VU60	60	100	L2B	550	242×175×175	B13	0	13,9	63/108	SMF, H
301160	56265 SMF		VU60X	60	100	L2B	550	242×175×175	B13	1	13,9	63/108	SMF, H
301455	55559 SMF		VU55H	55	90	L2	500	242×175×190	B13	0	14,0	63/90	SMF, H
301660	56008 SMF		VU60H	60	100	L2	600	242×175×190	B13	0	14,4	63/90	SMF, H
301861	56068 SMF	N50ZL SMF, 55D23L SMF	VU60J	60	100	56068	600	230×173×200/220	B01	0	14,8	60/90	SMF, ME, H
301560	56069 SMF	N50Z SMF, 55D23R SMF	VU60JX	60	100	56069	600	230×173×200/220	B01	1	14,8	60/90	SMF, ME, H
301067	56568 SMF		VU65J	65	109	56068	650	230×173×200/220	B01	0	15,3	60/90	SMF, ME, H
301165	56569 SMF		VU65JX	65	110	56069	650	230×173×200/220	B01	1	15,3	60/90	SMF, ME, H
301063	56309 SMF		VU63	63	106	L3B	600	278×175×175	B13	0	15,4	51/80	SMF, H, HD
301073	57309 SMF		VU73	73	126	L3B	630	278×175×175	B13	0	15,9	51/80	SMF, H, HD
301266	56638 SMF		VU66H	66	112	L3	600	278×175×190	B13	0	16,1	51/80	SMF, H, HD
301274	57412 SMF		VU74H	74	128	L3	680	278×175×190	B13	0	17,1	51/80	SMF, H, HD
301174	57413 SMF		VU74HX	74	128	L3	680	278×175×190	B13	1	17,1	51/80	SMF, H, HD
301270	57029 SMF	NS70L SMF, 65D26L SMF	VU70J	70	120	57029	700	259×175×200/221	B1	0	17,0	48/80	SMF, ME, H
301370	57024 SMF	NS70 SMF, 65D26R SMF	VU70JX	70	120	57024	700	259×175×200/221	B1	1	17,0	48/80	SMF, ME, H
301275	57529 SMF		VU75J	75	130	57029	740	259×175×200/221	B1	0	17,6	48/80	SMF, ME, H
301175	57524 SMF		VU75JX	75	130	57024	740	259×175×200/221	B1	1	17,6	48/80	SMF, ME, H
301092	59249 SMF		VU92H	92	165	L4	800	315×175×190	B13	0	19,9	42/60	SMF, H, HD
301088	58803 SMF		VU88	88	156	L5B	720	353×175×175	B13	0	19,9	36/72	SMF, H, HD
301492	59220 SMF		VU92	92	165	L5B	800	353×175×175	B13	0	20,4	36/72	SMF, H, HD
301192	59221 SMF		VU92X	92	165	L5B	800	353×175×175	B13	1	20,4	36/72	SMF, H, HD
301288	58827 SMF		VU88H	88	156	L5	720	353×175×190	B13	0	20,7	36/60	SMF, H, HD
301400	60038 SMF		VU10H	100	156	L5	850	353×175×190	B13	0	21,7	36/60	SMF, H, HD
301095	59518 SMF	NX120-7L SMF, 105D31L SMF	VU95J	95	171	59518	850	306×173×200/221	B01	0	20,5	42/70	SMF, ME, H
301195	59519 SMF	NX120-7 SMF, 105D31R SMF	VU95JX	95	171	59519	850	306×173×200/221	B01	1	20,5	42/70	SMF, ME, H
301010	61002		VU11H	110	203	L6	1000	394×175×190	B13	0	24,5	36/60	KH, HD
301295	BCI 31 SMF		VU95BCI	95	171	BCI 31	700	330×173×218/239	B1	0	24,4	42/60	SMF, ME, H, HD
301610	BCI 31S SMF		VU110BCI	110	203	BCI 31	1000	330×173×218/239	B1	0	25,7	42/60	SMF, ME, H, HD
301495	BCI 31 SMF-D		VU95BCID	95	171	BCI 31	700	330×173×218/237	B1	0	24,4	42/60	SMF, ME, H, HD, DP
301810	BCI 31S SMF-D		VU110BCID	110	203	BCI 31	1000	330×173×218/237	B1	0	25,7	42/60	SMF, ME, H, HD, DP

VOLTHOR ULTRA TRUCK

Flooded starter batteries, **Sb/Ca** technology | TRUCK batteries | Flat lid with M27 plugs

ID Nr.	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
301210	61028	VUT11	110	203	60528	800	345x172x218/238	B0	0	25,3	36/48	H
301410	61028	VUT11P	110	203	60528	800	345x175x218/238	B1	0	25,3	36/48	H
974912	61044	VUT11M	110	203	MAC110	720	509x175x182/208	B3	3	31,1	24/32	H, HD
301020	62047	VUT12	120	225	60528	900	345x172x218/238	B0	0	26,7	36/48	H
301025	62512	VUT12H	125	235	62512	800	345x172x269/289	B0	0	31,8	24/36	H
975912	63530	VUT13A	135	258	A	850	513x189x194/220	B0	3	35,6	24/35	H, HD
976912	63544	VUT13M	135	258	MAC110	850	509x175x182/208	B3	3	33,3	24/40	H, HD
977912	63545	VUT13MR	135	258	MAC110	850	509x175x182/208	B3	4	33,3	24/40	H, HD
978912	64323	VUT14M	143	258	MAC143	900	509x216x184/210	B3	3	38,7	21/35	H, HD
161913	64548	VUT14B	145	280	B	900	512x222x194/221	B0	3	39,7	21/28	H, HD, EMS
980912	65048	VUT15M	150	292	MAC110	1000	509x175x182/208	B3	3	36,9	24/32	H, HD
162913	67018	VUT17	170	338	B	1050	512x222x194/221	B0	3	42,7	21/28	H, HD, EMS
163913	67019	VUT17R	170	338	B	1050	512x222x194/221	B0	4	42,7	21/28	H, HD, EMS
164913	68032	VUT18	180	361	B	1100	512x222x194/221	B0	3	43,7	21/28	H, HD, EMS
165913	69032	VUT19	190	385	B	1200	512x222x194/221	B0	3	45,4	21/28	H, HD, EMS
166913	70032	VUT20B	200	409	B	1200	512x222x194/221	B0	3	45,4	21/28	H, HD, EMS
986912	70027	VUT20C	200	409	C	1200	518x273x214/241	B0	3	52,7	18/24	H, HD, EMS
987912	72527	VUT22	225	469	C	1300	518x273x214/241	B0	3	56,1	18/24	H, HD, EMS
109712	6TN	VUT11D7	100	182	D7	740	282x269x208/230	B0	2	30,8	24/36	H, HD
963912	70027	VT20C	200	409	C	1200	518x273x214/241	B0	3	52,7	18/24	H, HD, EMS
964912	72527	VT22	225	469	C	1300	518x273x214/241	B0	3	56,1	18/24	H, HD, EMS
600712	6TN	VT11D7	110	203	D7	740	282x269x208/230	B0	2	30,8	24/36	H, HD



VOLTHOR TRUCK

VOLTHOR SUPREME TRUCK

Flooded starter batteries, **Ca/Ca** technology | TRUCK batteries

ID Nr.	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
308612	63544 SMF	VST13M	135	258	MAC110	850	509x175x196/223	B3	3	33,3	24/40	SMF, ME, H, HD
309612	64030 SMF	VST14	140	269	A	850	507x188x200/228	B0	3	35,6	24/35	SMF, ME, H, HD
310612	65048 SMF	VST15M	150	292	MAC110	1000	509x175x196/223	B3	3	36,9	24/40	SMF, ME, H, HD
438612	65018 SMF	VST15	150	292	B	950	513x222x194/221	B0	3	40,4	21/28	SMF, ME, H, HD, EMS
439612	68032 SMF	VST18	180	338	B	1100	513x222x194/221	B0	3	43,5	21/28	SMF, ME, H, HD, EMS
313612	70027 SMF	VST20	200	409	C	1200	517x275x214/241	B0	3	52,7	18/24	SMF, ME, H, HD, EMS
314612	72527 SMF	VST22	225	469	C	1300	517x275x214/241	B0	3	56,1	18/24	SMF, ME, H, HD, EMS

VOLTHOR SUPREME utilises the latest innovations in Ca/Ca manufacturing technology, providing for the highest cold start performance and superior reliable power as demanded by the latest generation of cars with high energy drain. The SMF lid/cover provides complete roll over spill protection and is entirely maintenance free throughout the batteries life.

- + Sealed cover construction
- + Higher number of plates ensure 30% better starting capabilities
- + The expanded metal technology results in better corrosion resistance and providing a longer life time
- + The level indicator (magic eye) provides an instant status check
- + Explosion protection prevents flame brake-in into the battery
- + Ideal for cars with lots of electrical equipment
- + Battery of highest quality



VOLTHOR SUPREME

Flooded starter batteries, Ca/Ca technology | CAR batteries

ID Nr.	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
301054	55401 SMF	VS54	54	88	L1B	510	207x175x175	B13	0	12,3	72/120	SMF, ME, H
301655	55510 SMF	VS55H	55	90	L1	560	207x175x190	B13	0	12,8	72/100	SMF, ME, H
301062	56249 SMF	VS62	62	104	L2B	600	242x175x175	B13	0	14,5	63/108	SMF, ME, H
301466	56649 SMF	VS66H	66	112	L2	640	242x175x190	B13	0	15,0	63/90	SMF, ME, H
301475	57510 SMF	VS75	75	130	L3B	720	278x175x175	B13	0	16,5	51/80	SMF, ME, H, HD
301675	57549 SMF	VS75H	78	130	L3	750	278x175x190	B13	0	17,5	51/80	SMF, ME, H, HD
301085	58514 SMF	VS85	85	150	L4B	800	315x175x175	B13	0	18,8	42/72	SMF, ME, H, HD
301000	60032 SMF	VS100	100	182	L5B	850	353x175x175	B13	0	21,1	36/72	SMF, ME, H, HD
301200	60044 SMF	VS100H	100	182	L5	900	353x175x190	B13	0	22,3	36/60	SMF, ME, H, HD

ENERGY IN MOTION



OUR CONTRIBUTION T

VOLTHOR EFB Stop & Go batteries are so called Enhanced Flooded Batteries intended for use in vehicles with entry level Start-Stop function. EFB batteries utilize the latest innovations in Ca/Ca flooded battery manufacturing technology, providing for the sup reliable power as demanded by the latest generation of cars with entry level Start-Stop system.

- + MFW fleece on positive plates, preventing active material shedding boast twice as much cyclic capability as standard batteries and can be more discharged without any loss of functionality
- + Improved charge acceptance for recovering energy more quickly during driving phase using special expander with carbon
- + The expanded metal technology results in better corrosion resistance providing a longer life time
- + Sealed cover construction, roll over proof
- + Maintenance free
- + The level indicator (magic eye) provides an instant status check
- + Explosion protection with flame arrestor



VOLTHOR EFB Stop & Go

EFB starter batteries, Ca/Ca technology | CAR batteries

ID	DIN marking	JIS marking (old/new)	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
512260	56068 SMF	N50ZL SMF, 55D23L SMF	VEF60J	60	100	56068	600	230x173x200/220	B01	0	16,4	60/90	SMF, ME, H
512160	56069 SMF	N50Z SMF, 55D23R SMF	VEF60JX	60	100	56069	600	230x173x200/220	B01	1	16,4	60/90	SMF, ME, H
512060	56088 SMF		VEF60	60	100	L2	580	242x175x190	B13	0	16,4	63/90	SMF, ME, H
512065	56588 SMF		VEF65	65	110	L3B	650	278x175x175	B13	0	15,9	51/80	SMF, ME, H, HD
512070	57088 SMF		VEF70	70	120	L3	680	278x175x190	B13	0	19,0	51/80	SMF, ME, H, HD
512080	58088 SMF		VEF80	80	140	L4	760	315x175x190	B13	0	21,1	42/60	SMF, ME, H, HD
512090	59088 SMF		VEF90	90	161	L5	850	353x175x190	B13	0	23,7	36/60	SMF, ME, H, HD
512005	60518 SMF		VEF10J	105	192	59518	900	306x173x200/221	B01	0	22,8	42/70	SMF, ME, H
512105	60519 SMF		VEF10JX	105	192	59519	900	306x173x200/221	B01	1	22,8	42/70	SMF, ME, H
452612	74027 SMF		VEF24	240	506	C	1250	517x275x214/241	B0	3	59,6	18/24	SMF, ME, H, HD, EMS

0 LOW CO₂ EMISSIONS

VOLTHOR AGM Stop & Go batteries are Valve Regulated Lead Acid batteries intended for use in vehicles with enhanced level Start-Stop function with break energy recuperation. VRLA AGM battery is improved lead acid battery to its maximum performance. The battery cells are closed by a pressure relief valve and electrolyte is immobilized in absorbed glass mat (AGM). Plate stacks are kept in the cells under pressure.

THE ADVANCED CONSTRUCTION OF BATTERY LEADS TO IMPROVED PERFORMANCE IN:

- + Very low water consumption due to internal oxygen recombination,
- + Preventing active material shedding boast more than three times as much cyclic capability as standard batteries and can be more discharged without any loss of functionality
- + Increased cranking power due to better utilization of cell volume by more than 30 %
- + High rate charge acceptance for recovering energy more quickly during driving phase
- + Both side pasting of plates provides better corrosion resistance providing a longer life time
- + No acid stratification like in flooded cells
- + Explosive safe - minimum explosive gasses are produced
- + Vibration resistance and no acid leakage in case of crash



VOLTHOR AGM Stop & Go

AGM starter batteries, Ca/Ca technology | CAR batteries

ID Nr.	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	L×W×H (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
713060	L2 AGM	VGM60	60	109	L2	680	242×175×190	B13	0	17,9	63/90	AGM, H
713070	L3 AGM	VGM70	70	130	L3	760	278×175×190	B13	0	20,5	48/80	AGM, H
713080	L4 AGM	VGM80	80	151	L4	800	315×175×190	B13	0	23,2	42/60	AGM, H
713090	L5 AGM	VGM95	95	184	L5	850	353×175×190	B13	0	26,0	36/60	AGM, H
713105	L6 AGM	VGM105	105	206	L6	950	394×175×190	B13	0	29,2	36/60	AGM, H

L0
175×175×190
B13



L1B SMF
207×175×175
B13



L1 SMF
207×175×190
B13



L2B SMF
242×175×175
B13



L2 SMF
242×175×190
B13



L3B SMF
278×175×175
B13



L3 SMF
278×175×190
B13



L4B SMF
315×175×175
B13



L4 SMF
315×175×190
B13



L5B SMF
353×175×175
B13



L5 SMF
353×175×190
B13



L6
394×175×190
B13



53520, 53522 SMF
196×134×202/223
B01



54523/84, 54524/51 SMF
236×128×202/223
B0



56068, 56069 SMF
230×173×200/220
B01



57024, 57029 SMF
259×175×200/221
B1



59518, 59519 SMF
306×173×200/221
B01



BCI SMF
330×173×218/239
B1



BCI DUAL SMF
330×173×218/237
B1



60528
345×172×218/238
B0



62512
345×172×269/289
B0



MAC110
509×175×182/208
B3



MAC110 SMF
509×175×196/223
B3



MAC143
509×216×184/210
B0



A
513×189×194/220
B0



A SMF
507×188×200/228
B0



B
512×222×194/221
B0



B SMF
513×222×194/221
B0



C
518×273×217/241
B0



C SMF
517×275×214/241
B0



D7
282×269×208/230
B0



Mower
196×127×159/185
B0

