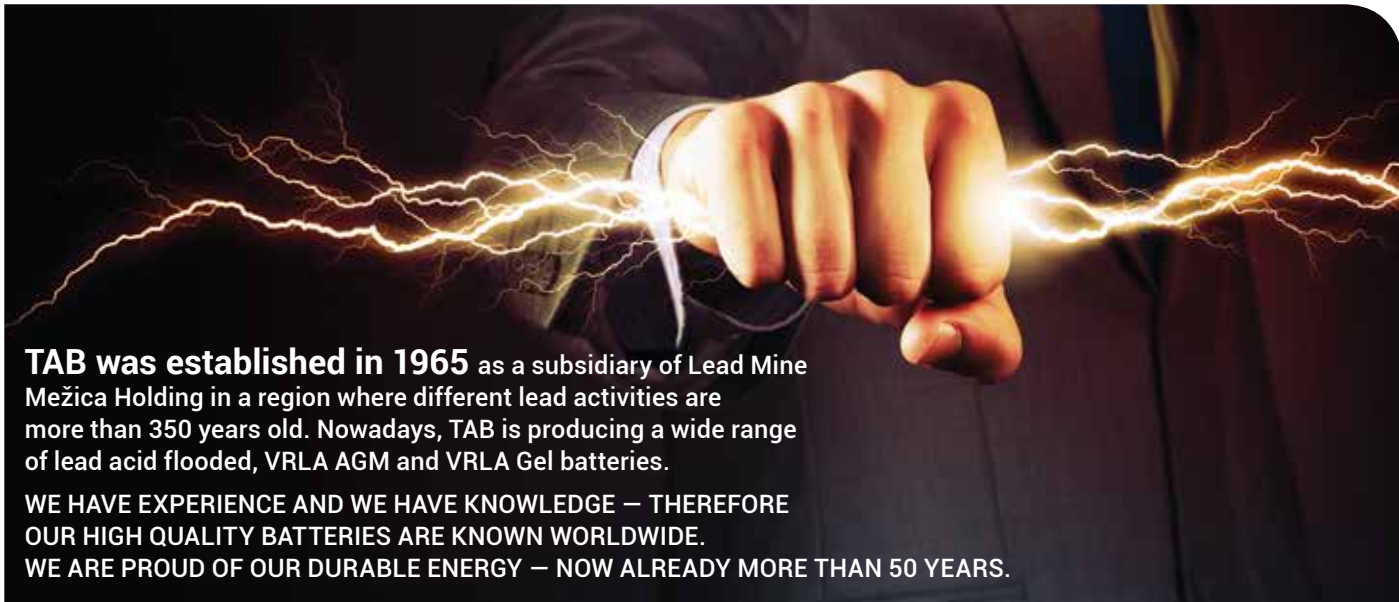


# TAB STARTER BATTERIES



# TAB

TAB POLAR  
TAB MAGIC  
TAB POLAR TRUCK  
TAB MAGIC TRUCK  
TAB EFB Stop & Go  
TAB AGM Stop & Go



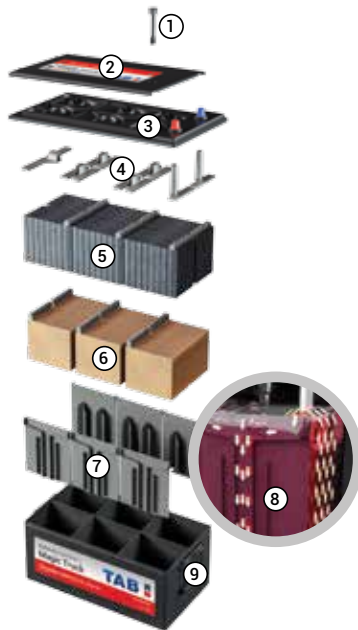
**TAB was established in 1965** as a subsidiary of Lead Mine Mežica Holding in a region where different lead activities are more than 350 years old. Nowadays, TAB is producing a wide range of lead acid flooded, VRLA AGM and VRLA Gel batteries.

**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

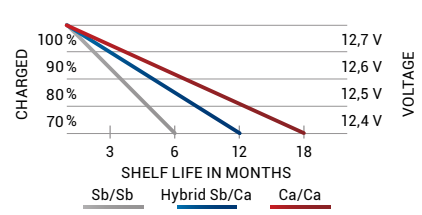
# ENERGY IN MOTION

## NEW TRUCK BATTERIES IN C BOX

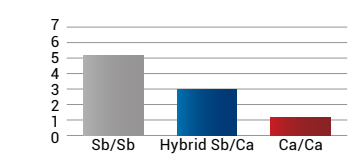


- 1 Electrolyte level indicator – Magic Eye
- 2 Top SMF lid with central degassing and flame arrestors (Battery manufactured by using Sb/Ca technology is fitted with a Flat lid with M27 plugs, for easy access)
- 3 Main SMF lid with labyrinth for additional safety and very low water loss
- 4 Robust plate 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

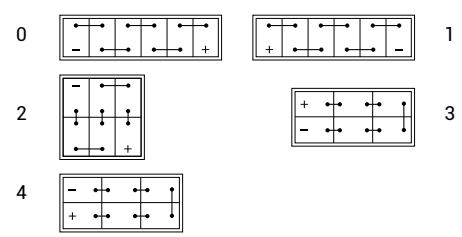
## Allowable shelf life (SELFDISCHARGE)



## Water consumption (g/Ah)



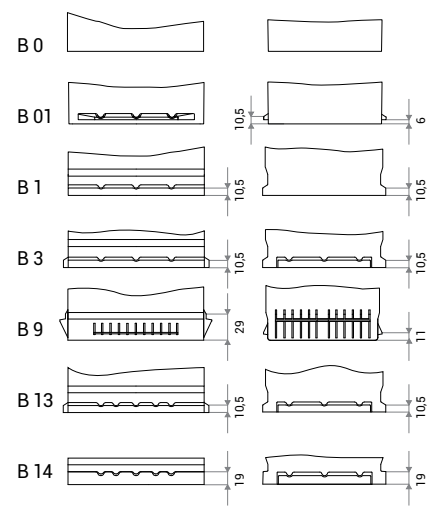
## Layout



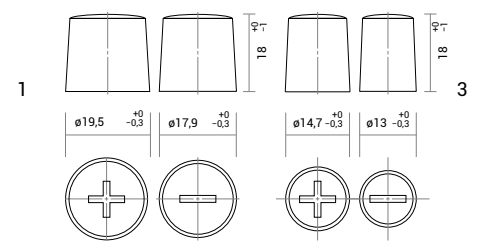
## Glossary of remarks

- K** KAMINA
- H** HANDLE
- KH** KAMINA HANDLE
- ME** MAGIC EYE
- HD** HEAVY DUTY
- SMF** MAINTENANCE FREE = SEALED
- JIS** JAPANESE POLES
- DP** DUAL POLES
- A** POLE ADAPTER
- AGM** ABSORBED GLASS MAT
- EMS** ELECTROLYTE MIXING SYSTEM
- M** LAWN MOWER BATTERY

## Base hold down



## Terminals



**TAB POLAR** 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. TAB Polar 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



## TAB POLAR

Flooded starter batteries, Ca/Ca technology | CAR batteries

TAB 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
217025*			U1R-25	25	36	U1	250	196x127x159/185	B0	0	7,2	96/128	SMF, H, M
217125*			U1-25	25	36	U1	250	196x127x159/185	B0	1	7,2	96/128	SMF, H, M
217032*			U1R-32	32	48	U1	350	196x127x159/185	B0	0	8,0	96/128	SMF, H, M
217132*			U1-32	32	48	U1	350	196x127x159/185	B0	1	8,0	96/128	SMF, H, M
246835	53520 SMF	NS40ZL SMF, 36B20L SMF	S35J	35	53	53520	300	196x127x205/226	B0	0	9,4	96/128	SMF, H, JIS
246935	53522 SMF	NS40Z SMF, 36B20R SMF	S35JX	35	53	53522	300	196x127x205/226	B0	1	9,4	96/128	SMF, H, JIS
246735	53521 SMF	NS40ZL SMF, 36B20L SMF	S35JP	35	53	53520	300	196x134x205/226	B01	0	9,4	96/128	SMF, H, JIS
245445	54506		P45	45	71	L0	400	175x175x190	B13	0	10,5	72/120	K
246036	53649 SMF		P36	36	55	L1B	330	207x175x175	B13	0	10,2	60/120	SMF, H
246044	54402 SMF		S44	44	69	L1B	360	207x175x175	B13	0	10,6	60/120	SMF, H
246144	54403 SMF		S44X	44	69	L1B	360	207x175x175	B13	1	10,6	60/120	SMF, H
246045	54502 SMF		S45	45	71	L1B	420	207x175x175	B13	0	11,3	60/120	SMF, H
246646	54512 SMF		P45H	45	71	L1	400	207x175x190	B13	0	11,7	60/100	SMF, H
246050	55010 SMF		S50H	50	81	L1	450	207x175x190	B13	0	12,2	60/100	SMF, H
246145	54520 SMF	NS60LS BHD	S45J	45	71	53520	400	196x134x205/226	B01	0	10,6	72/96	SMF, H, JIS
246545	54522 SMF	NS60S BHD	S45JX	45	71	53522	400	196x134x205/226	B01	1	10,6	72/96	SMF, H, JIS
246845	54523/84 SMF	NS60LS SMF, 46B24LS SMF	S45JA	45	71	54523/84	400	237x127x205/226	B0	0	11,9	72/96	SMF, H, JIS, A
246945	54524/51 SMF	NS60S SMF, 46B24RS SMF	S45JAX	45	71	54524/51	400	237x127x205/226	B0	1	11,9	72/96	SMF, H, JIS, A
246855	55523/84 SMF		S55JA	55	90	54523/84	540	237x127x205/226	B0	0	13,5	72/96	SMF, H, JIS, A
246755	55524/51 SMF		S55JAX	55	90	54524/51	540	237x127x205/226	B0	1	13,5	72/96	SMF, H, JIS, A
246250	55001 SMF		P50	50	81	L2B	450	242x175x175	B13	0	12,8	57/108	SMF, H
246055	55509 SMF		S55	55	90	L2B	500	242x175x175	B13	0	13,3	57/108	SMF, H
246060	56009 SMF		S60	60	100	L2B	550	242x175x175	B13	0	13,9	57/108	SMF, H
246160	56265 SMF		S60X	60	100	L2B	550	242x175x175	B13	1	13,9	57/108	SMF, H
246455	55549 SMF		P55H	55	90	L2	500	242x175x190	B13	0	14,0	57/90	SMF, H
246062	56008 SMF		S60H	60	100	L2	600	242x175x190	B13	0	14,4	57/90	SMF, H
246860	56068 SMF	N50ZL SMF, 55D23L SMF	S60J	60	100	56068	600	230x173x200/220	B01	0	14,8	60/90	SMF, H
246960	56069 SMF	N50Z SMF, 55D23R SMF	S60JX	60	100	56069	600	230x173x200/220	B01	1	14,8	60/90	SMF, H
246865	56568 SMF		S65J	65	110	56068	650	230x173x200/220	B01	0	15,3	60/90	SMF, H
246965	56569 SMF		S65JX	65	110	56069	650	230x173x200/220	B01	1	15,3	60/90	SMF, H
246263	56309 SMF		P63	63	106	L3B	600	278x175x175	B13	0	15,4	48/80	SMF, H, HD
246073	57309 SMF		S73	73	126	L3B	630	278x175x175	B13	0	15,9	48/80	SMF, H, HD
246866	56609 SMF		P66H	66	112	L3	600	278x175x190	B13	0	16,1	48/80	SMF, H, HD
246074	57412 SMF		S74H	74	128	L3	680	278x175x190	B13	0	17,1	48/80	SMF, H, HD
246374	57013 SMF		S74HX	74	128	L3	680	278x175x190	B13	1	16,6	48/80	SMF, H, HD
246870	57029 SMF	NS70L SMF, 65D26L SMF	S70J	70	120	57029	700	269x173x198/218	B9	0	17,0	48/80	SMF, H
246770	57024 SMF	NS70 SMF, 65D26R SMF	S70JX	70	120	57024	700	269x173x198/218	B9	1	17,0	48/80	SMF, H
246875	57529 SMF		S75J	75	130	57029	740	269x173x198/218	B9	0	17,6	48/80	SMF, H
246775	57524 SMF		S75JX	75	130	57024	740	269x173x198/218	B9	1	17,6	48/80	SMF, H
246292	59249 SMF		P92H	92	165	L4	800	315x175x190	B13	0	19,9	36/60	SMF, H, HD
246889	58803 SMF		P88	88	156	L5B	720	353x175x175	B13	0	19,9	36/72	SMF, H, HD
246092	59220 SMF		S92	92	165	L5B	850	353x175x175	B13	0	20,9	36/72	SMF, H, HD
246192	59221 SMF		S92X	92	165	L5B	850	353x175x175	B13	1	20,9	36/72	SMF, H, HD
246888	58822 SMF		P88H	88	156	L5	760	353x175x190	B13	0	20,7	36/60	SMF, H, HD
246492	59944 SMF		S99H	99	179	L5	850	353x175x190	B13	0	21,3	36/60	SMF, H, HD
246895	59518 SMF	NX120-7L SMF, 105D31L SMF	S95J	95	171	59518	850	303x174x198/218	B01	0	20,5	42/70	SMF, H
246995	59519 SMF	NX120-7 SMF, 105D31R SMF	S95JX	95	171	59519	850	303x174x198/218	B01	1	20,5	42/70	SMF, H
246005	60518 SMF		S10J	105	192	59518	900	303x174x198/218	B01	0	22,8	42/70	SMF, H
246305	60519 SMF		S10JX	105	192	59519	900	303x174x198/218	B01	1	22,8	42/70	SMF, H
245610	61002		P11H	110	203	L6	1000	394x175x190	B13	0	25,3	36/60	KH, HD
246495	BCI 31 SMF		S95BCI	95	171	BCI 31	700	330x173x218/239	B1	0	24,1	42/60	SMF, H, HD
246410	BCI 31S SMF		S110BCI	110	203	BCI 31	1000	330x173x218/239	B1	0	25,4	42/60	SMF, H, HD
246695	BCI 31 SMF-D		S95BCID	95	171	BCI 31	700	330x173x218/237	B1	0	24,1	42/60	SMF, H, HD, DP
246610	BCI 31S SMF-D		S110BCID	110	203	BCI 31	1000	330x173x218/237	B1	0	25,4	42/60	SMF, H, HD, DP

\* LAWN MOWER BATTERY

## TAB POLAR TRUCK

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

TAB ID	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
116105	61028	TR11	110	203	60528	800	345x172x218/238	B0	0	25,3	36/48	H
116405	61028	TR11P	110	203	60528	800	345x172x218/238	B1	0	25,3	36/48	H
484912	61044	TR11M	110	203	MAC110	760	509x175x182/208	B3	3	31,6	24/40	H, HD
125810	62047	TR12	120	225	60528	900	345x172x218/238	B0	0	26,7	36/48	H
116125	62512	TR12H	125	236	62512	800	345x172x269/289	B0	0	31,8	24/36	H
942912	63530	TR13A	135	258	A	850	513x189x194/220	B0	3	35,6	24/35	H, HD
487912	63544	TR13M	135	258	MAC110	850	509x175x182/208	B3	3	34,3	24/40	H, HD
944912	63545	TR13MR	135	258	MAC110	850	509x175x182/208	B3	4	34,3	24/40	H, HD
946912	64323	TR14M	143	276	MAC143	950	509x218x184/210	B3	3	37,4	21/35	H, HD
948912	64518	TR14B	145	280	B	950	512x222x194/220	B0	3	39,7	21/28	H, HD
489912	65048	TR15M	150	292	MAC110	1000	509x175x182/208	B3	3	36,9	24/40	H, HD
496912	67018	TR17	170	338	B	1050	512x222x194/220	B0	3	43,7	21/28	H, HD
497912	67019	TR17R	170	338	B	1050	512x222x194/220	B3	4	43,7	21/28	H, HD
490912	68032	TR18	180	361	B	1100	512x222x194/220	B0	3	45,0	21/28	H, HD
275912	69032	TR19	190	385	B	1200	512x222x194/220	B0	3	45,0	21/28	H, HD
491912	70032	TR20B	200	409	B	1200	512x222x194/220	B0	3	45,8	21/28	H, HD
<b>950912</b>	<b>70027</b>	<b>TR20C</b>	<b>200</b>	<b>409</b>	<b>C</b>	<b>1200</b>	<b>518x273x214/241</b>	<b>B0</b>	<b>3</b>	<b>52,8</b>	<b>18/24</b>	<b>H, HD, EMS</b>
<b>951912</b>	<b>72527</b>	<b>TR22</b>	<b>225</b>	<b>469</b>	<b>C</b>	<b>1300</b>	<b>518x273x214/241</b>	<b>B0</b>	<b>3</b>	<b>56,1</b>	<b>18/24</b>	<b>H, HD, EMS</b>
100712	6TN	TR10D7	100	182	D7	720	282x269x208/230	B0	2	30,8	24/36	H, HD
107712	6TNS	TR11D7	110	203	D7	800	282x269x208/230	B0	2	32,7	24/36	H, HD



TAB TRUCK

## TAB MAGIC TRUCK

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

TAB ID	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
153612	63544 SMF	TM13M	135	258	MAC110	850	509x175x196/233	B3	3	34,3	24/40	SMF, ME, H, HD
296612	64030 SMF	TM14	140	269	A	850	507x188x200/228	B0	3	35,6	24/35	SMF, ME, H, HD
154612	65048 SMF	TM15M	150	292	MAC110	1000	509x175x196/233	B3	3	36,9	24/40	SMF, ME, H, HD
110612	65018 SMF	TM15	150	292	B	950	510x222x195/222	B0	3	39,9	21/28	SMF, ME, H, HD
111612	67018 SMF	TM17	170	338	B	1050	510x222x195/222	B0	3	43,2	21/28	SMF, ME, H, HD
<b>112612</b>	<b>70027 SMF</b>	<b>TM20</b>	<b>200</b>	<b>409</b>	<b>C</b>	<b>1200</b>	<b>514x275x214/241</b>	<b>B0</b>	<b>3</b>	<b>52,8</b>	<b>18/24</b>	<b>SMF, ME, H, HD, EMS</b>
<b>126612</b>	<b>72527 SMF</b>	<b>TM22</b>	<b>225</b>	<b>469</b>	<b>C</b>	<b>1300</b>	<b>514x275x214/241</b>	<b>B0</b>	<b>3</b>	<b>56,1</b>	<b>18/24</b>	<b>SMF, ME, H, HD, EMS</b>

**TAB MAGIC** 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



## TAB MAGIC

Flooded starter batteries, Ca/Ca technology | CAR batteries

TAB ID	DIN marking	Short code	C20 (Ah)	RC (min)	Box type	EN (A)	LxWxH (mm)	BHD	Layout	Weight (kg)	PCS/Pallet (EUR/CNT)	Remarks
189054	55401 SMF	M54	54	88	L1B	510	207x175x175	B13	0	12,3	60/120	SMF, ME, H
189058	55510 SMF	M55H	55	90	L1	560	207x175x190	B13	0	13,2	60/100	SMF, ME, H
189063	56249 SMF	M62	62	104	L2B	600	242x175x175	B13	0	14,5	57/108	SMF, ME, H
189065	56649 SMF	M66H	66	112	L2	640	242x175x190	B13	0	15,0	57/90	SMF, ME, H
189072	57510 SMF	M75	75	130	L3B	720	278x175x175	B13	0	16,5	48/80	SMF, ME, H, HD
189080	57549 SMF	M75H	75	130	L3	750	278x175x190	B13	0	17,5	48/80	SMF, ME, H, HD
189085	58514 SMF	M85	85	150	L4B	800	315x175x175	B13	0	18,8	36/72	SMF, ME, H, HD
189099	60032 SMF	M100	100	182	L5B	900	353x175x175	B13	0	22,1	36/72	SMF, ME, H, HD
189800	60044 SMF	M100H	100	182	L5	920	353x175x190	B13	0	22,2	36/60	SMF, ME, H, HD

## ENERGY IN MOTION



# OUR CONTRIBUTION T

**TAB 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 superior 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



## TAB EFB Stop & Go

EFB starter batteries, Ca/Ca technology | CAR batteries

TAB ID	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
212860	56068 SMF	N50ZL SMF, 55D23L SMF	SG60J	60	100	56068	600	230×173×200/220	B01	0	16,4	60/90	SMF, H
212760	56069 SMF	N50Z SMF, 55D23R SMF	SG60JX	60	100	56069	600	230×173×200/220	B01	1	16,4	60/90	SMF, H
212060	56088 SMF		SG60	60	100	L2	580	242×175×190	B13	0	17,0	57/90	SMF, ME, H
212065	56588 SMF		SG65	65	110	L3B	650	278×175×175	B13	0	18,0	48/80	SMF, ME, H, HD
212070	57088 SMF		SG70	70	120	L3	680	278×175×190	B13	0	19,5	48/80	SMF, ME, H, HD
212080	58088 SMF		SG80	80	140	L4	760	315×175×190	B13	0	22,0	36/60	SMF, ME, H, HD
212090	59088 SMF		SG90	90	161	L5	850	353×175×190	B13	0	25,0	36/60	SMF, ME, H, HD

# 0 LOW CO<sub>2</sub> EMISSIONS

**TAB 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



## TAB AGM Stop & Go

AGM starter batteries, Ca/Ca technology | CAR batteries

TAB ID	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
213060	L2 AGM	AG60	60	109	L2	680	242×175×190	B13	0	17,9	57/90	AGM, H
213070	L3 AGM	AG70	70	130	L3	760	278×175×190	B13	0	20,5	48/80	AGM, H
213080	L4 AGM	AG80	80	151	L4	800	315×175×190	B13	0	23,2	36/60	AGM, H
213090	L5 AGM	AG95	95	184	L5	850	353×175×190	B13	0	26,0	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**  
196×134×205/226  
B01



**54523/84, 54524/51 SMF**  
237×127×205/226  
B0



**56068, 56069 SMF**  
230×172×200/220  
B01



**57024, 57029 SMF**  
269×173×198/218  
B9



**59518, 59519 SMF**  
303×174×198/218  
B01



**BCI SMF**  
330×173×218/239  
B1



**60528**  
345×172×218/238  
B0



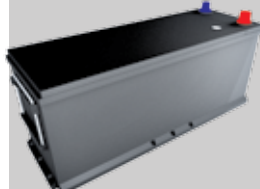
**62512**  
345×172×269/289  
B0



**MAC110**  
509×175×182/208  
B3



**MAC110 SMF**  
509×175×196/233  
B3



**MAC143**  
509×218×184/210  
B3



**A**  
513×189×194/220  
B0



**A SMF**  
507×188×200/228  
B0



**B**  
512×222×194/220  
B0



**B SMF**  
510×222×195/222  
B0



**C**  
518×273×214/241  
B0



**C SMF**  
514×275×214/241  
B0



**D7**  
282×269×208/230  
B0

