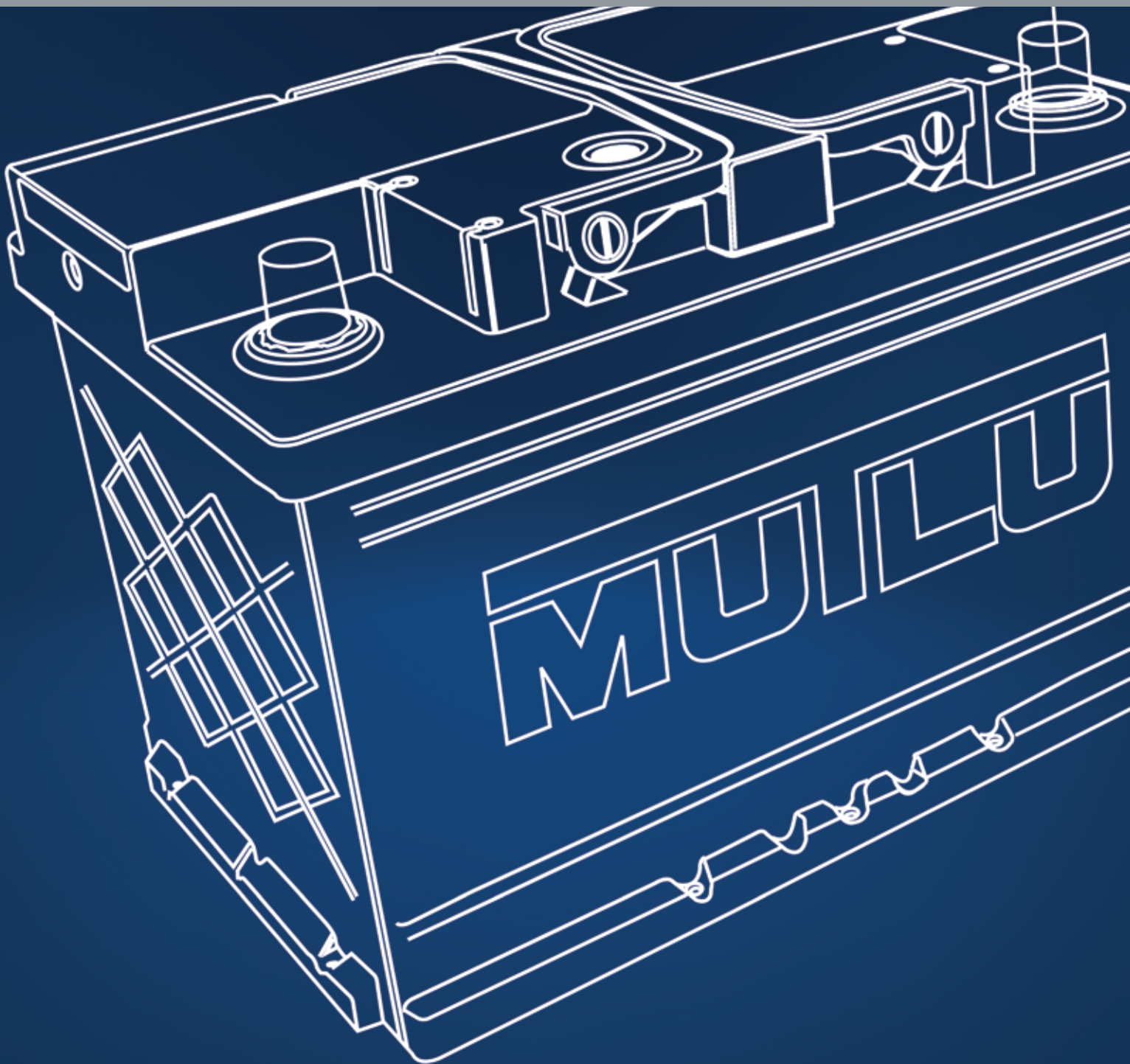


MUTLU

STARTER TECHNICAL SPECIFICATIONS



*START
STOP
ENGINE*

**START
STOP**

EFB
technology

**START
STOP**

AGM
technology

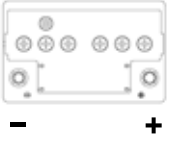
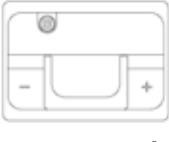
TECHNICAL SPECIFICATIONS

12 VOLT STARTER BATTERIES															
Type			Capacity at 20 hour rate, +27 °C Ah	Cold start performance at -18 °C		Layout	Terminal	Holddown	Overall dimensions (mm)				Weight With acid (kg)	Explanations	Lid type
TS EN	ETN	Equal DIN Type		TS EN A	DIN A				Length (mm)	Width (mm)	Height Except Terminal (mm)	Height (mm)			
SD-35A	535 020 024	535 20	35	240	150	0	3	B0	196	125	202	222	10.3	13	
SD-35B	535 022 024	535 22	35	240	150	1	3	B0	196	125	202	222	10.3	13	
SD-42A	542 103 035		42	350	175	1	1	B0	196	125	202	222	11.2	13	
SD-42B	542 105 035		42	350	175	1	3	B0	196	125	202	222	11.2	13	
SD-42C			42	350	175	0	1	B0	196	125	202	222	11.2	13	
SD-42D			42	350	175	0	3	B0	196	125	202	222	11.2	13	
SD-42E			42	350	175	0	3	B1	196	134	202	222	11.2	2.13.14	
SD-42F			42	350	175	1	3	B1	196	134	202	222	11.2	2.13.14	
SD-45A	545 150 039	545 23	45	390	200	0	1	B0	237	127	201	222	12.6	6.13	
SD-45B	545 149 039	545 24	45	390	200	1	1	B0	237	127	201	222	12.6	6.13	
SD-45C		545 84	45	390	200	0	3	B0	237	127	201	222	12.6	6.13	
SD-45D		545 51	45	390	200	1	3	B0	237	127	201	222	12.6	6.13	
SD-55A			55	450	250	0	1	B0	237	127	201	222	13.6	6.13	
SD-55B			55	450	250	1	1	B0	237	127	201	222	13.6	6.13	
SD-55C			55	450	255	0	1	B1	203	175	200	222	13.1	13.14	
SD-55D			55	450	255	1	1	B1	203	175	200	222	13.1	13.14	
SD-60C			60	520	260	0	1	B0	232	173	204	225	15.5	2.6.13.14	
SD-60D			60	520	260	1	1	B0	232	173	204	225	15.5	2.6.13.14	
SD-68C			68	600	310	0	1	B0	232	173	204	225	16.25	2.6.13.14	
SD-68D			68	600	310	1	1	B0	232	173	204	225	16.25	2.6.13.14	
SD-60E			60	520	260	0	1	B1	232	178	204	225	15.5	2.6.13.14	
SD-60F			60	520	260	1	1	B1	232	178	204	225	15.5	2.6.13.14	
SD-68G			68	600	310	0	1	B1	232	178	204	225	16.25	2.6.13.14	
SD-68H			68	600	310	1	1	B1	232	178	204	225	16.25	2.6.13.14	
SD-70E			70	630	340	0	1	B0	260	173	204	225	17.6	2.6.13.14	
SD-70F			70	630	340	1	1	B0	260	173	204	225	17.6	2.6.13.14	
SD-70G			70	630	340	0	1	B1	260	178	204	225	17.6	2.6.13.14	
SD-70H			70	630	340	1	1	B1	260	178	204	225	17.6	2.6.13.14	
SD-75E			75	650	350	0	1	B0	260	173	204	225	17.8	2.6.13.14	
SD-75F			75	650	350	1	1	B0	260	173	204	225	17.8	2.6.13.14	
SD-75G			75	650	350	0	1	B1	260	178	204	225	17.8	2.6.13.14	
SD-75H			75	650	350	1	1	B1	260	178	204	225	17.8	2.6.13.14	
SD-80E			80	660	360	0	1	B0	260	173	204	225	19.0	2.6.13.14	
SD-80F			80	660	360	1	1	B0	260	173	204	225	19.0	2.6.13.14	
SD-80G			80	660	360	0	1	B1	260	178	204	225	19.0	2.6.13.14	
SD-80H			80	660	360	1	1	B1	260	178	204	225	19.0	2.6.13.14	


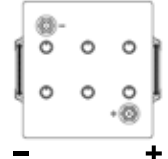
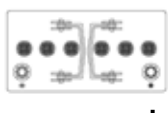
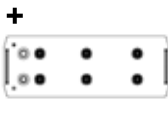


TECHNICAL SPECIFICATIONS

12 VOLT STARTER BATTERIES															
Type			Capacity at 20 hour rate, +27 °C Ah	Cold start performance at -18 °C		Layout	Terminal	Holddown	Overall dimensions (mm)				Weight With acid (kg)	Explanations	Lid type
TS EN	ETN	Equal DIN Type		TS EN A	DIN A				Length (mm)	Width (mm)	Height Except Terminal (mm)	Height (mm)			
SD-50C			50	450	255	0	1	B0	262	175	200	222	15.0	6.13	
SD-50D			50	450	255	1	1	B0	262	175	200	222	15.0	6.13	
SD-60A	560 150 045		60	450	255	0	1	B1	262	175	205	226	17.3	13	
SD-60B	560 151 045		60	450	255	1	1	B1	262	175	205	226	17.3	13	
SD-90E			90	720	340	0	1	B1	306	175	202	224	22.9	2.6.9.13.14	
SD-90F			90	720	340	1	1	B1	306	175	202	224	22.9	2.6.9.13.14	
SD-100E			100	760	395	0	1	B1	306	175	202	224	24.2	2.6.9.13.14	
SD-100F			100	760	395	1	1	B1	306	175	202	224	24.2	2.6.9.13.14	
SD-105D	605 103 076		105	760	395	0	1	B3	347	175	213	235	26.0	3.6.9.14	
SD-105E	605 106 076		105	760	395	1	1	B3	347	175	213	235	26.0	3.6.9.14	
LB1-36A	536 046 030	536 46	36	300	175	0	1	B14	205	175	175	175	10.5	1.5.6	
LB1-36B	536 121 030		36	300	175	1	1	B14	205	175	175	175	10.5	1.5.6	
LBS1-36C	536 055 030		36	300	175	0	1	B13	207	175	175	175	10.5	1.5.6	
LS1-40A	540 101 036		40	360	200	0	1	B13	207	175	190	190	12.0	1.5.6	
LS1-40B	540 123 036		40	360	200	1	1	B13	207	175	190	190	12.0	1.5.6	
LBS1-44A	544 117 036	544 65	44	360	210	0	1	B13	207	175	175	175	11.3	1.5.6	
LBS1-44B	544 118 036	544 66	44	360	210	1	1	B13	207	175	175	175	11.3	1.5.6	
LS1-44A	544 069 036	544 69	44	360	210	0	1	B13	207	175	190	190	11.7	1.5.6	
LS1-44B	544 064 036	544 64	44	360	210	1	1	B13	207	175	190	190	11.7	1.5.6	
LS1-50A	550 110 045	550 54	50	450	250	0	1	B13	207	175	190	190	12.6	1.5.6	
LS1-50B	550 136 045		50	450	250	1	1	B13	207	175	190	190	12.6	1.5.6	
*LBS1-47A	547 101 042		47	420	250	0	1	B13	207	175	175	175	12.0	1.2.5.6	
*LBS2-50A			50	600	310	0	1	B13	242	175	175	175	15.0	1.2.5.6	
*LBS2-55A	555 154 051		55	510	255	0	1	B13	242	175	175	175	14.2	1.2.5.6	
*LBS3-65A	565 118 072		65	720	420	0	1	B13	278	175	175	175	17.8	1.2.5.6	
*LS1-50E	550 153 042		50	420	250	0	1	B13	207	175	190	190	13.0	1.2.5.6	
*LS2-60B	560 169 060		60	600	310	0	1	B13	242	175	190	190	16.0	1.2.5.6	
*LS3-70A	570 143 072		70	720	420	0	1	B13	278	175	190	190	18.2	1.2.5.6	
LBS2-55C		555 66	55	420	255	0	1	B13	242	175	175	175	13.6	1.2.6.14	
LS2-55C	555 125 045	555 59	55	450	255	0	1	B13	242	175	190	190	14.3	1.2.6.14	
LS2-55D	555 126 045		55	450	255	1	1	B13	242	175	190	190	14.3	1.2.6.14	
LBS2-60C			60	540	255	0	1	B13	242	175	175	175	14.8	1.2.6.14	
LBS2-60D			60	540	255	1	1	B13	242	175	175	175	14.8	1.2.6.14	
LS2-60C	560 137 052		60	520	255	0	1	B13	242	175	190	190	15.1	1.2.6.14	
LS2-60L	560 138 052		60	520	255	1	1	B13	242	175	190	190	15.1	1.2.6.14	
LS3-66C	566 124 056	566 38	66	560	300	0	1	B13	278	175	190	190	16.8	1.2.6.14	
LS3-72G	572 112 072		72	720	420	0	1	B13	278	175	190	190	18.2	1.2.6.14	
LS5-100C	600 111 085	600 44	100	850	500	0	1	B13	353	175	190	190	23.5	1.2.6.14	



TECHNICAL SPECIFICATIONS

12 VOLT STARTER BATTERIES															Explanations	Lid type
Type			Capacity at 20 hour rate, +27 °C Ah	Cold start performance at -18°C		Layout	Terminal	Holddown	Overall dimensions (mm)				Weight With acid (kg)			
TS EN	ETN	Equal DIN Type		TS EN A	DIN A				Length (mm)	Width (mm)	Height Except Terminal (mm)	Height (mm)				
LS2-65B			65	540	260	0	1	B13	242	175	190	190	16.6	1.2.5.6.11		
LBS2-45A	545 133 036	545 19	45	360	220	0	1	B13	242	175	175	175	13.0	1.2.5.6		
LBS2-45B	545 134 036		45	360	220	1	1	B13	242	175	175	175	13.0	1.2.5.6		
LBS2-50B	550 134 042	550 40,550 56	50	420	210	0	1	B13	242	175	175	175	13.4	1.2.5.6		
LBS2-50C	550 135 042		50	420	210	1	1	B13	242	175	175	175	13.4	1.2.5.6		
LS2-50A			50	420	210	0	1	B13	242	175	190	190	13.5	1.2.5.6		
LS2-50B			50	420	210	1	1	B13	242	175	190	190	13.5	1.2.5.6		
LBS2-55B		555 66	55	420	255	0	1	B13	242	175	175	175	13.6	1.2.5.6		
LS2-55A	555 125 045	555 59	55	450	255	0	1	B13	242	175	190	190	14.3	1.2.5.6		
LS2-55B	555 126 045	555 65	55	450	255	1	1	B13	242	175	190	190	14.3	1.2.5.6		
LS2-60F	560 137 052		60	520	255	0	1	B13	242	175	190	190	15.1	1.2.5.6		
LS2-60J	560 138 052		60	520	255	1	1	B13	242	175	190	190	15.1	1.2.5.6		
LBS2-60A			60	540	255	0	1	B13	242	175	175	175	14.8	1.2.5.6		
LBS2-60B			60	540	255	1	1	B13	242	175	175	175	14.8	1.2.5.6		
LS2-62A	562 114 054	562 19	62	540	280	0	1	B13	242	175	190	190	15.5	1.2.5.6		
LS2-62B	562 115 054	562 21	62	540	280	1	1	B13	242	175	190	190	15.5	1.2.5.6		
LS2-63A	563 107 055		63	550	300	0	1	B13	242	175	190	190	15.6	1.2.5.6		
LS2-63B	563 108 055		63	550	300	1	1	B13	242	175	190	190	15.6	1.2.5.6		
LS2-65A			65	540	330	1	1	B13	242	175	190	190	15.8	1.2.5.6		
LBS3-60B	560 147 060	560 97	60	590	300	0	1	B13	278	175	175	175	17.0	1.2.5.6		
LBS3-66A	566 116 059	566 49	66	590	300	0	1	B13	278	175	175	175	17.0	1.2.5.6		
LS3-66A	566 124 056	566 38	66	560	300	0	1	B13	278	175	190	190	16.8	1.2.5.6		
LS3-66B	566 123 056	566 05	66	560	300	1	1	B13	278	175	190	190	16.8	1.2.5.6		
LS3-70B	570 135 064		70	640	380	0	1	B13	278	175	190	190	17.7	1.2.5.6		
L3-72A	572 107 057		72	570	270	0	1	B1	275	175	190	190	19.0	1.2.5.6.11		
L3-72B	572 111 072		72	720	420	0	1	B1	275	175	190	190	18.2	1.2.5.6		
LS3-72E	572 112 072	572 20	72	720	420	0	1	B13	278	175	190	190	18.2	1.2.5.6		
LS3-72F	572 113 072	572 19	72	720	420	1	1	B13	278	175	190	190	18.2	1.2.5.6		
LS3-75A	575 111 072		75	720	380	0	1	B13	278	175	190	190	18.3	1.2.5.6		
LS3-75B	575 110 072		75	720	380	1	1	B13	278	175	190	190	18.3	1.2.5.6		
LBS4-80A	580 115 064	580 14	80	640	420	0	1	B13	315	175	175	175	18.8	1.2.5.6		
LBS4-80B			80	700	400	0	1	B13	315	175	175	175	20.2	1.2.5.6		
LS4-90A			90	850	500	0	1	B13	315	175	190	190	22.0	1.2.5.6		
LS4-90B			90	850	500	1	1	B13	315	175	190	190	22.0	1.2.5.6		
LS5-88B	588 118 072	588 27	88	720	395	0	1	B13	353	175	190	190	22.0	1.2.5.6		
LS5-88C	588 119 072	588 21	88	720	395	1	1	B13	353	175	190	190	22.0	1.2.5.6		
LS5-90A	590 114 072	588 33	90	720	395	0	1	B13	353	175	190	190	21.8	1.2.5.6		
LS5-90B	590 113 072		90	720	395	1	1	B13	353	175	190	190	21.8	1.2.5.6		
LS5-100A	600 111 085	600 44	100	850	500	0	1	B13	353	175	190	190	23.2	1.2.5.6		
LS5-100B	600 113 085		100	850	500	1	1	B13	353	175	190	190	23.2	1.2.5.6		
LS6-110A	610 111 092		110	920	520	0	1	B13	394	175	190	190	26.5	1.2.5.6		

TECHNICAL SPECIFICATIONS

12 VOLT STARTER BATTERIES															
Type			Capacity at 20 hour rate, +27 °C Ah	Cold start performance at -18°C		Layout	Terminal	Holddown	Overall dimensions (mm)				Weight With acid (kg)	Explanations	Lid type
TS EN	ETN	Equal DIN Type		TS EN A	DIN A				Length (mm)	Width (mm)	Height Except Terminal (mm)	Height (mm)			
SD-90A	590 102 072	590 43	90	720	340	0	1	B1	323	175	197	218	22.6	3.6.9	
SD-90B	590 106 072		90	720	340	1	1	B1	323	175	197	218	22.6	3.6.9	
SD-100A	600 119 076		100	760	395	0	1	B1	323	175	197	218	24.2	3.6.9	
SD-100B	600 120 076		100	760	395	1	1	B1	323	175	197	218	24.2	3.6.9	
SD-105A	605 103 076	605 28	105	760	395	0	1	B3	347	175	207	228	25.6	3.6.9	
SD-105B	605 106 076	605 27	105	760	395	1	1	B3	347	175	207	228	25.6	3.6.9	
SD-110A	610 108 076	610 47	110	760	420	0	1	B3	347	175	207	228	26.5	3.6.9	
D7-100A	600 011 072	600 30	100	720		2	1	B0	286	269	208	230	30.5	3.4	
D7-125A	625 023 090	625 23	125	900		2	1	B0	286	269	208	230	36.5	3.4	
D2-115A			115	800	440	0	1	B1	344	173	212	233	27.2	2	
D3-128A	628 101 090	625 11,625 12	128	900	450	0	1	B0	344	173	262	286	32.0	2.7	
D4a-120A	620 111 085	620 40	120	850	420	3	1	B3	513	186	195	223	34.0	3.7.9	
D4-120B		620 34	120	850	420	3	1	B0	513	186	195	223	34.0	3.7.9	
D4a-135A	635 104 095	635 31	135	950	450	3	1	B3	513	186	195	223	35.7	3.7.9	
D4-135B			135	950	450	3	1	B0	513	186	195	223	35.7	3.7.9	
D4a-120E			120	850	420	3	1	B3	513	186	195	223	34.0	3.5.7.9	
D4a-135E			135	950	450	3	1	B3	513	186	195	223	35.7	3.5.7.9	
D5a-150A	650 105 100	643 31	150	1000	500	3	1	B3	513	223	195	223	41.2	3.7.9	
D5-150B		643 17,655 13	150	1000	500	3	1	B0	513	223	195	223	41.2	3.7.9	
D5a-165A	665 106 110	665 15	165	1100	540	3	1	B3	513	223	195	223	43.0	3.7.9	
D5-165B	665 105 110	665 14	165	1100	540	3	1	B0	513	223	195	223	43.0	3.7.9	
D5a-180A	680 101 120	680 19	180	1200	600	3	1	B3	513	223	195	223	46.0	3.7.9	
D5-180B		680 22	180	1200	600	3	1	B0	513	223	195	223	46.0	3.7.9	
D5a-190A	690 103 125		190	1250	630	3	1	B3	513	223	195	223	47.0	3.7.9	
D5-190B			190	1250	630	3	1	B0	513	223	195	223	47.0	3.7.9	
D5-190C	690 104 125	680 22	190	1250	630	3	1	B0	513	223	195	223	48.0	3.8.9	
D5a-150E			150	1000	500	3	1	B3	513	223	195	223	41.2	3.5.7.9	
D5a-165E			165	1100	540	3	1	B3	513	223	195	223	43.0	3.5.7.9	
D5a-180E			180	1200	600	3	1	B3	513	223	195	223	46.0	3.5.7.9	

TECHNICAL SPECIFICATIONS

12 VOLT STARTER BATTERIES															
Type			Capacity at 20 hour rate, +27 °C Ah	Cold start performance at- 18°C		Layout	Terminal	Holddown	Overall dimensions (mm)				Weight With acid (kg)	Explanations	Lid type
TS EN	ETN	Equal DIN Type		TS EN A	DIN A				Length (mm)	Width (mm)	Height Except Terminal (mm)	Height (mm)			
D6-200A	700 103 120		200	1200	630	3	1	B0	518	273	216	242	54.7	3.7.9	
D6-200B	700 027 115	700 27	200	1150	630	3	1	B0	518	273	216	242	55.0	3.8.9.12	
D6-210A	710 101 125	710 14	210	1250	700	3	1	B0	518	273	216	242	55.6	3.7.9	
D6-220A	720 105 140		220	1400	600	3	1	B0	518	273	216	242	57.0	3.7.9	
D6-220B	720 102 125	720 18	220	1250	600	3	1	B0	518	273	216	242	57.0	3.8.9	
D6-225A	725 101 125	725 11	225	1250	600	3	1	B0	518	273	216	242	57.5	3.8.9.12	
D6-225B	725 101 145	725 12	225	1450	720	3	1	B0	518	273	216	242	59.0	3.7.9	
D6-240A	740 101 150		240	1500	750	3	1	B0	518	273	216	242	60.0	3.7.9	
D6-240B	740 101 145		240	1450	720	3	1	B0	518	273	216	242	63.0	3.8.9.12	
D6-200C			200	1200	630	3	1	B0	518	273	216	242	54.7	3.5.7.9	
D6-225C			225	1250	600	3	1	B0	518	273	216	242	57.5	3.5.8.9.12	
D6-250A			250	1450	750	3	1	B0	518	273	216	242	63.0	3.5.8.9.12	


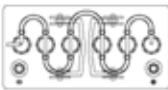


EXPLANATIONS

- 1- Block Lid (Post height within lid height)
- 2- Integrated Handle to Cover
- 3- Lateral Handle (from container)
- 4- NATO VG 95282

- 5- Kamina
- 6- With Charge Indicator
- 7- Heavy Duty Batteries
- 8- Super Heavy Duty Batteries
- 9- Additional Vibration Resistance

- 10- With High Cycle Capacity
- 11- Taxi Battery
- 12- Bus Battery
- 13- Special Battery for Japanese Cars
- 14- Sealed Battery

TECHNICAL SPECIFICATIONS

12 VOLT MARINE BATTERIES															
Type			Capacity at 20 hour rate, +27 °C Ah	Cold start performance at- 18°C		Layout	Terminal	Holddown	Overall dimensions (mm)				Weight With acid (kg)	Explanations	Lid type
TS EN	ETN	Equal DIN Type		TS EN A	DIN A				Length (mm)	Width (mm)	Height Except Terminal (mm)	Height (mm)			
LS5-90M	590 115 060		90	600	340	0	1	B13	353	175	190	190	22.2	1.2.5.6.9.10	
D3-125M	625 012 090	625 12	125	900	450	0	1	B0	349	175	263	286	32.5	2.9.10	
D5a-180M	680 019 100	680 19	180	1000	560	3	1	B3	513	223	195	223	48.5	3.6.9.10	
D6-200M	700 102 100	700 27	200	1000	600	3	1	B0	518	273	216	242	62.2	3.6.9.10	

EXPLANATIONS

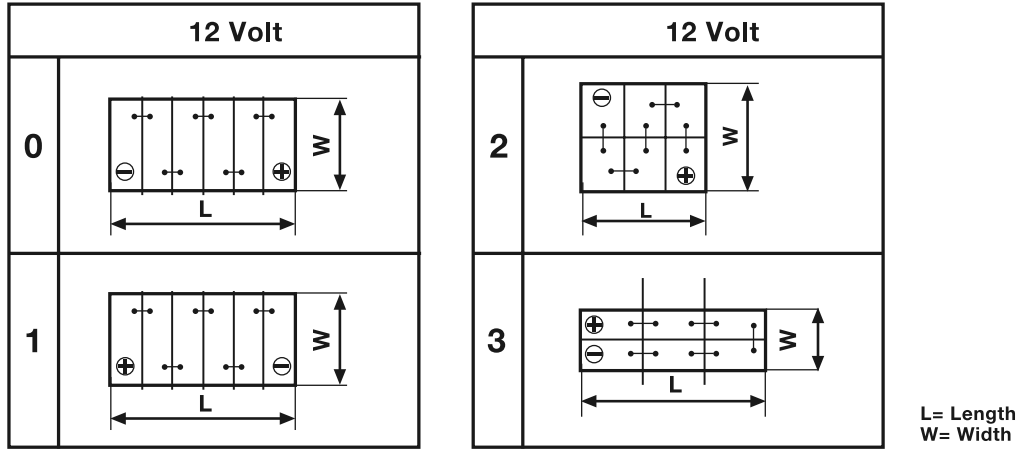
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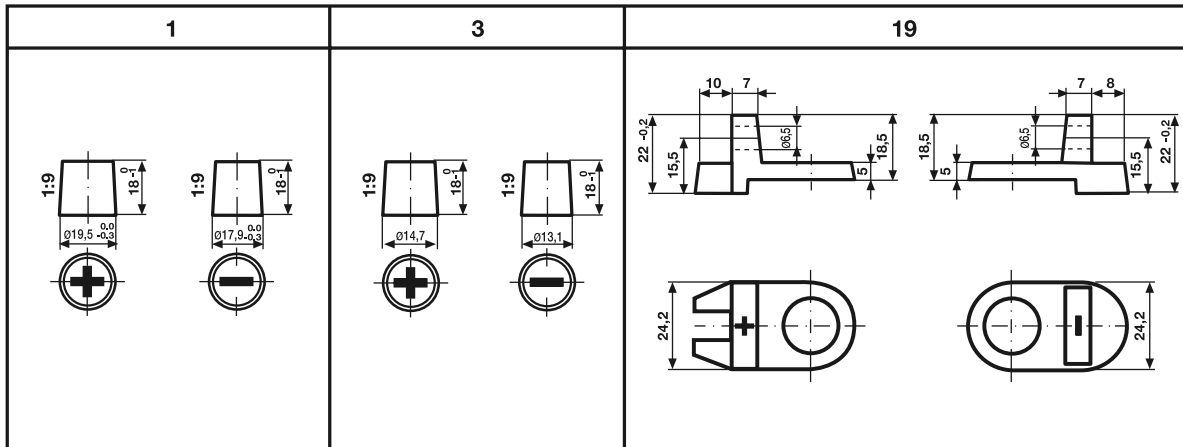
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TECHNICAL SPECIFICATIONS

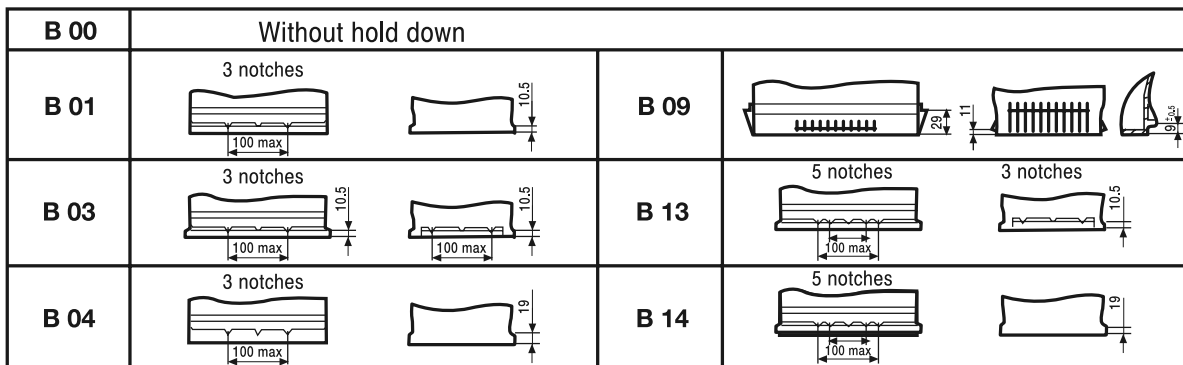
KEY TO BATTERY LAYOUTS




KEY TO BATTERY TERMINALS

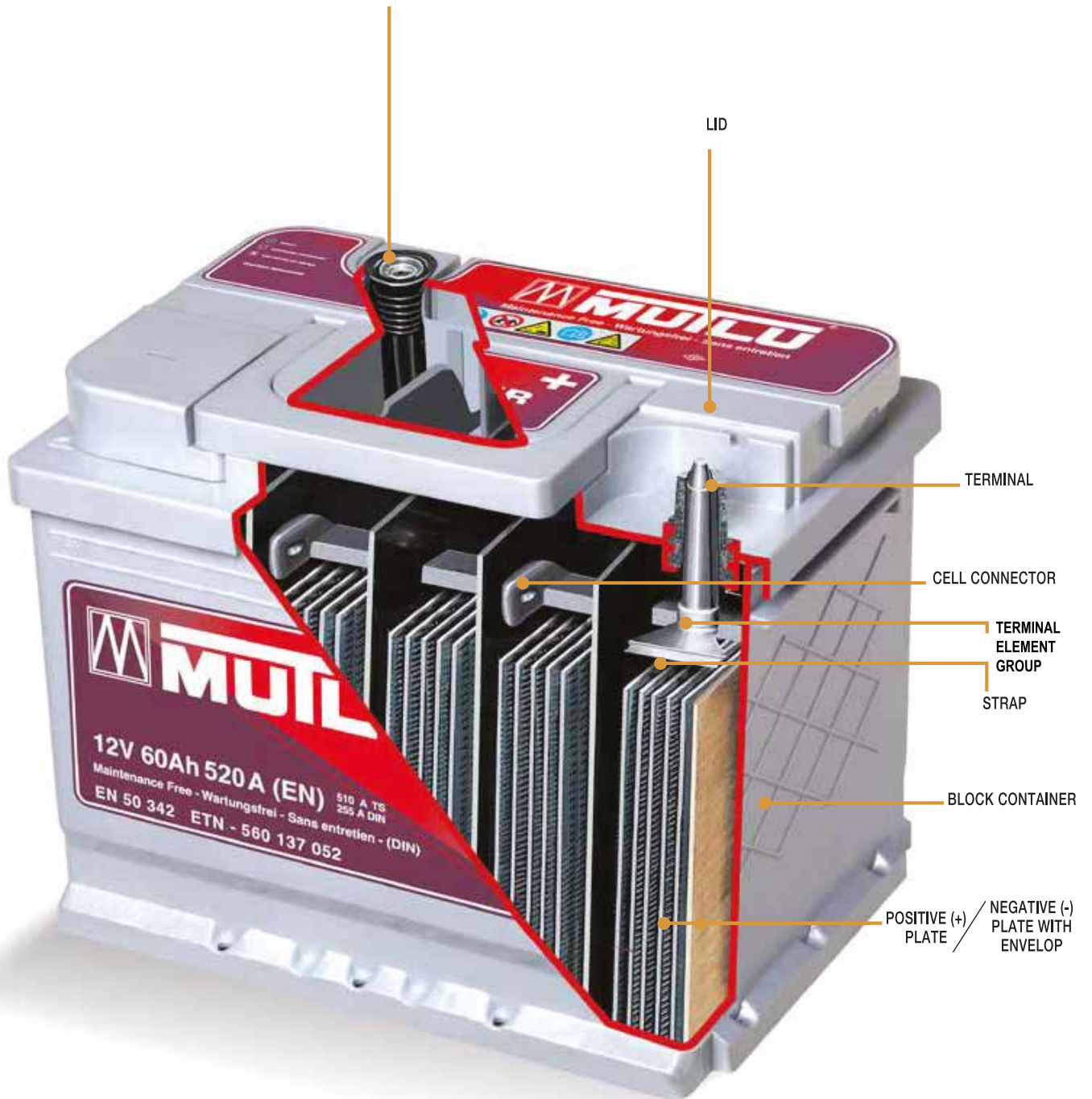


BATTERY HOLD DOWNS



CHARGE INDICATOR

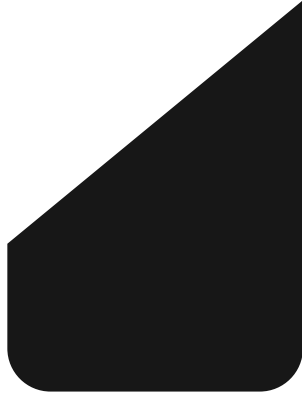
	GREEN	BLACK	YELLOW OR WHITE
	Ready	Charging Necessary	Add Distilled Water



BATTERY INSTALLATION GUIDE

1. Choose the right battery for the application.
 - Identify the battery as standard flooded, HD, EFB or AGM.
 - Choose the battery with same type and dimensions
 - Choose the battery with similar capacity and CCA values
 - Choose an AGM battery if only the original one is AGM type
 - Standart flooded batteries should not be used in vehicles with Start&Stop system using EFB batteries
2. Removing the old battery
 - Identify the polarity of the cables before removing the old battery
 - Remove the negative connector first
 - Remove the positive connector
 - Remove the old battery
 - Observe the battery tray. Clean the tray if required.
3. Instaling the new battery
 - Place the new battery in the tray. Make sure the battery fits the tray.
 - Fix the battery in the tray.
 - Connect the positive connector first
 - Connect the negative connector
 - Make sure both connections are connected tightly and not loose
 - It is recommended to apply vaseline to protect the battery posts.
4. After installing the new battery, hand over the old battery to the dealer for recycling.





**START
STOP**

**AGM-EFB
TECHNOLOGY**

EXPERT

since
1945

**BEST
SELLING
IN TURKEY**

MUTLU

HIGH PERFORMANCE

**NUMBER ONE
BATTERY**