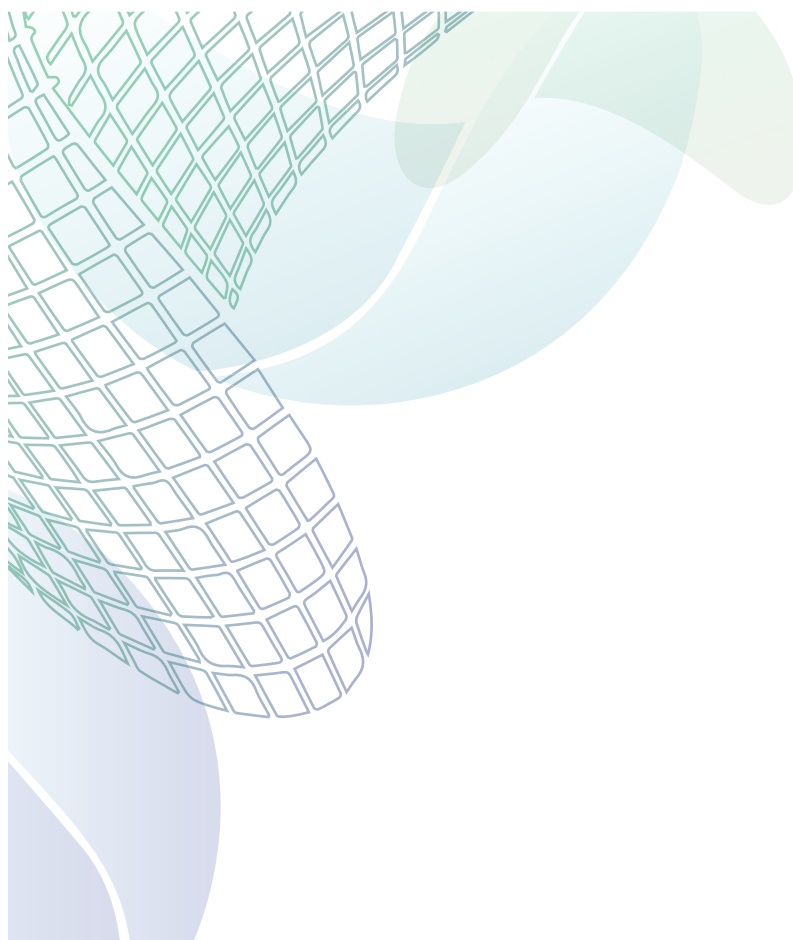




CELLYTE 6-12 TUA AGM SERIES

6 - 12V SEALED VRLA MONBLOC BATTERY



SEC - 6 - 12 - TUA

info@secbattery.com / www.secbattery.com

SEC Industrial Battery Co. Ltd.

Battery Profile



DESIGN LIFE

12 year design life in float service @ 30°C with catalyst.

15Ah-250Ah at C/10 to 1.80vpc @ 25°C.

MANUFACTURED TO COMPLY

IEC 60896-21/22-2004
with ABS V-O Cover & Case
UL Component approval
BS EN 60896-2:1996

APPLICATIONS

Telecommunications
Emergency Lighting
Photovoltaic/Solar
Computer Power Supply
Standby Power Supply
Cellular Radio
Switchgear operations
UPS System

SPECIFICATIONS

Positive electrode:	Virgin Pure Lead 1.6% Tin
Negative electrode:	Calcium Grid Plate
Float Voltage:	2.25 vpc $\pm 1\%$ at 25°C
Max.Charge Voltage:	2.35 vpc $\pm 1\%$ at 25°C
Electrolyte:	Sulphuric Acid
Safety Valve:	1-3 PSI Self-Resealing
Post Seal :	Triple Seal / barrier
Terminals:	Copper Insert for SS bolts
Container / Cover:	Flame Insert ABS V-O

INNOVATIVE FEATURES

Valve regulated with Catalyst
Propriety virgin Lead 1.6% Tin Alloy
Latest plates formation technology
Uniform cell cooling
Increased Capacity with Catalyst
Never requires addition of water
Spill proof and leak proof
Very low gassing on float charge
Explosion proof / Increased safety
Operates at low internal pressure
For use in vertical or horizontal positions



CAPACITY

Ampere Hour @ 25°C



SEC Bloc Type	End Volts /Cell	DISCHARGE DATA AMPS			End Volts /Cell	DISCHARGE DATA AMPERE HOURS at 25°C											
		DISCHARGE TIME IN MINS				DISCHARGE TIME IN HOURS											
		15MINS	30MINS	45MINS		1hr	1.5hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	12hr	24hr	
6-TUA-120	1.80	203	127	95.2	1.85	69.6	80.3	86.0	91.8	96.0	100	103	110	112	114	119	
	1.75	220	132	98.1	1.80	73.2	85.2	91.2	97.5	102	106	109	117	120	122	128	
	1.67	231	135	98.5	1.75	75.4	87.3	93.4	99.9	104	108	112	120	123	125	132	
6-TUA-175	1.80	285	183	138	1.85	104	120	129	137	144	149	155	166	167	170	178	
	1.75	309	189	143	1.80	108	128	136	146	153	158	164	175	180	182	192	
	1.67	325	193	143	1.75	111	131	140	149	156	162	168	180	184	187	198	
6-TUA-200	1.80	317	203	154	1.85	116	134	143	153	160	166	172	184	187	190	198	
	1.75	344	210	158	1.80	120	142	152	162	170	176	182	194	200	203	214	
	1.67	361	215	159	1.75	124	146	156	166	174	180	187	200	205	209	220	
6-TUA-210	1.80	319	204	154	1.85	119	137	147	157	164	170	176	188	191	194	203	
	1.75	346	211	159	1.80	121	146	156	166	174	180	187	199	205	208	218	
	1.67	363	216	160	1.75	124	149	160	170	178	185	191	205	210	214	225	

12-TUA-15	1.80	27.2	17.4	13.0	1.85	8.66	10.7	11.5	12.2	12.8	13.3	13.7	14.7	14.9	15.2	16.8	
	1.75	29.5	18.0	13.4	1.80	9.76	11.4	12.2	13.0	13.6	14.1	14.6	15.6	16.0	16.3	18.0	
	1.67	31.0	18.4	13.4	1.75	10.1	11.6	12.5	13.3	13.9	14.4	14.9	16.0	16.4	16.7	18.0	
12-TUA-20	1.80	37.7	24.1	18.0	1.85	12.9	14.9	15.9	17.0	17.8	18.5	19.1	20.4	20.7	21.1	21.6	
	1.75	40.9	25.0	18.6	1.80	13.5	15.8	16.9	18.1	18.9	19.6	20.3	21.7	22.2	22.6	24.0	
	1.67	43.0	25.5	18.6	1.75	14.0	16.2	17.3	18.5	19.4	20.1	20.8	22.2	22.8	23.3	24.0	
12-TUA-25	1.80	43.0	27.5	20.5	1.85	14.7	17.0	18.2	19.4	20.3	21.0	22.0	23.9	23.7	24.1	25.2	
	1.75	46.6	28.5	21.2	1.80	15.4	18.0	19.3	20.6	21.6	22.3	23.3	25.4	25.3	25.8	25.9	
	1.67	49.0	29.1	21.3	1.75	15.9	18.5	19.8	21.1	22.1	22.9	23.9	26.0	26.0	26.5	28.0	
12-TUA-30	1.80	54.3	34.8	26.0	1.85	18.6	21.6	23.0	24.7	25.8	26.7	27.6	29.4	30.0	30.6	30.6	
	1.75	58.9	36.0	26.8	1.80	19.5	22.8	24.4	26.2	27.4	28.3	29.3	31.2	32.0	32.8	33.0	
	1.67	61.9	36.8	26.9	1.75	20.1	23.4	25.0	26.8	28.0	29.0	30.0	32.0	33.0	33.7	34.0	
12-TUA-40	1.80	71.3	45.7	34.1	1.85	24.4	28.7	30.8	32.9	34.4	35.6	36.6	38.6	40.0	40.8	41.0	
	1.75	77.4	47.3	35.1	1.80	25.6	30.5	32.6	34.8	36.5	37.8	38.8	41.0	42.0	43.7	43.9	
	1.67	81.3	48.3	35.3	1.75	26.4	31.2	33.4	35.7	37.4	38.7	39.8	42.0	44.0	44.9	47.0	
12-TUA-50	1.80	90.9	58.2	43.5	1.85	31.1	35.9	38.4	41.1	43.0	44.5	46.1	49.3	50.1	51.0	52.0	
	1.75	98.7	60.3	44.8	1.80	32.7	38.1	40.8	43.5	45.6	47.2	48.9	52.2	53.6	54.6	55.0	
	1.67	104	61.6	45.0	1.75	33.7	39.0	41.8	44.7	46.8	48.4	50.1	53.6	55.0	56.1	59.0	
12-TUA-65	1.80	107	68.8	51.4	1.85	36.7	42.5	45.4	48.6	50.8	52.5	54.5	58.2	59.2	60.3	63.8	
	1.75	117	71.2	53.0	1.80	38.6	45.0	48.2	51.5	53.9	55.8	57.8	61.7	63.3	64.5	65.0	
	1.67	123	72.8	53.2	1.75	39.8	46.2	49.4	52.8	55.2	57.0	59.2	63.3	65.0	66.3	71.0	
12-TUA-70	1.80	116	74.1	55.3	1.85	39.5	45.7	48.9	52.2	54.7	56.5	58.7	62.7	63.7	64.9	69.3	
	1.75	126	76.7	57.0	1.80	41.6	48.5	51.9	55.5	58.0	60.0	62.2	66.5	68.2	69.5	74.8	
	1.67	132	78.4	57.3	1.75	42.8	49.7	53.2	56.7	59.5	61.5	63.6	68.2	70.0	71.4	77.0	
12-TUA-80	1.80	132	84.7	63.2	1.85	45.2	52.2	55.9	59.7	62.4	64.8	67.1	71.7	72.8	74.3	79.2	
	1.75	144	87.7	65.2	1.80	47.5	55.4	59.3	63.3	66.4	68.5	71.1	76.0	77.9	79.4	77.0	
	1.67	151	89.6	65.4	1.75	49.0	56.8	60.8	65.0	68.0	70.4	72.9	77.9	80.0	81.6	88.0	
12-TUA-90	1.80	153	97.8	73.0	1.85	52.2	60.1	64.3	68.7	71.9	74.5	77.3	82.8	83.7	85.4	90.0	
	1.75	166	101	75.3	1.80	54.9	63.8	68.2	72.9	76.3	79.0	81.9	87.8	90.0	91.3	89.0	
	1.67	174	104	75.6	1.75	56.5	65.3	69.9	74.7	78.2	81.0	84.0	90.0	92.0	93.8	100	
12-TUA-100	1.80	170	109	81.1	1.85	58.0	67.3	72.0	76.8	80.4	83.4	86.3	92.0	93.7	95.6	103	
	1.75	184	113	83.6	1.80	61.0	71.4	76.4	81.6	85.4	88.5	91.2	97.5	100	102	109	
	1.67	194	115	84.0	1.75	62.8	73.1	78.2	83.6	87.6	90.5	93.6	100	103	105	110	
12-TUA-110	1.80	183	117	87.0	1.85	62.6	72.5	77.6	82.8	86.8	89.9	93.0	99.0	101	103	109	
	1.75	199	122	89.7	1.80	65.9	76.9	82.3	87.9	92.0	95.3	98.4	105	108	110	109	
	1.67	209	124	90.0	1.75	67.9	78.8	84.4	90.0	94.4	97.5	107	108	111	113	121	
12-TUA-120	1.80	193	125	93.4	1.85	67.8	78.4	83.9	89.6	93.8	97.0	101	108	109	109	119	
	1.75	210	129	96.3	1.80	71.3	83.1	89.0	95.1	99.6	103	107	114	117	117	120	
	1.67	220	132	96.7	1.75	73.4	85.2	91.2	97.4	102	106	109	117	120	120	132	
12-TUA-130	1.80	215	135	101	1.85	76.3	88.2	94.4	101	106	109	113	121	123	125	133	
	1.75	233	140	104	1.80	77.6	93.5	100	107	112	116	120	128	131	134	139	
	1.67	245	143	104	1.75	79.9	95.9	103	110	115	119	123	131	135	138	148	
12-TUA-150	1.80	239	150	112	1.85	84.7	98.0	105	112	117	121	126	134	137	139	149	
	1.75	259	155	116	1.80	86.2	104	111	119	124	129	133	142	146	149	157	
	1.67	272	159	116	1.75	88.8	107	114	122	128	132	137	146	150	153	165	
12-TUA-160	1.80	243	155	118	1.85	90.4	105	112	119	125	130	134	143	146	149	159	
	1.75	263	161	121	1.80	91.9	111	119	127	133	137	142	152	156	158	179	
	1.67	277	164	122	1.75	94.7	114	122	130	136	141	146	156	160	163	177	
12-TUA-175	1.80	273	175	132	1.85	102	118	126	134	141	146	151	161	164	167	178	
	1.75	296	181	137	1.80	103	125	134	143	149	155	160	171	175	179	179	
	1.67	311	185	137	1.75	107	128	137	146	153	158	164	175	180	184	198	
12-TUA-200	1.80	303	194	147	1.85	113	131	140	149	156	162	167	179	182	186	198	
	1.75	329	201	152	1.80	115	139	148	158	166	172	178	190	195	198	228	
	1.67	346	206	152	1.75	118	142	152	162	170	176	182	195	200	204	220	
12-TUA-225	1.80	349	223	169	1.85	130	150	161	172	180	186	193	206	209	213	228	
	1.75	379	231	174	1.80	132	159	171	182	191	198	205	218	224	228	245	
	1.67	398	236	175	1.75	136	163	175	187	196	202	209	224	230	235	252	
12-TUA-250	1.80	379	243	184	1.85	141	163	175	187	196	202	209	224	228	232	242	
	1.75	412	251	190	1.80	144	173	185	198	207	215	222	237	244	248	262	
	1.67	432	257	190	1.75	148	177	190	203	212	220	228	243	250	255	270	

* Actual Battery Discharge Data may be $\pm$ 5% of figures shown.

CURRENT

Amps @ 25°C



SEC Bloc Type	End Volts /Cell	DISCHARGE DATA AMPS			End Volts /Cell	DISCHARGE DATA AMPS at 25°C										
		DISCHARGE TIME IN MINS				DISCHARGE TIME IN HOURS										
		15MINS	30MINS	45MINS		1hr	1.5hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	12hr	24hr
6-TUA-120	1.80	203	127	95.2	1.85	69.6	53.5	43.0	30.6	24.0	19.9	17.2	13.8	11.2	9.50	4.95
	1.75	220	132	98.1	1.80	73.2	56.8	45.6	32.5	25.5	21.1	18.2	14.6	12.0	10.2	5.33
	1.67	231	135	98.5	1.75	75.4	58.2	46.7	33.3	26.1	21.6	18.7	15.0	12.3	10.4	5.50
6-TUA-175	1.80	285	183	138	1.85	104	80.0	64.3	45.7	36.0	29.8	25.8	20.7	16.7	14.2	7.42
	1.75	309	189	143	1.80	108	85.0	68.0	48.6	38.2	31.6	27.3	21.9	18.0	15.2	8.00
	1.67	325	193	143	1.75	111	87.1	69.9	49.7	39.0	32.4	28.0	22.5	18.4	15.6	8.25
6-TUA-200	1.80	317	203	154	1.85	116	89.3	71.5	51.0	40.0	33.2	28.6	23.0	18.7	15.8	8.25
	1.75	344	210	158	1.80	120	94.7	76.0	54.0	42.5	35.2	30.3	24.3	20.0	16.9	8.90
	1.67	361	215	159	1.75	124	97.0	77.9	55.3	43.5	36.0	31.1	25.0	20.5	17.4	9.17
6-TUA-210	1.80	319	204	154	1.85	119	91.3	73.4	52.3	41.0	34.0	29.3	23.5	19.1	16.2	8.44
	1.75	346	211	159	1.80	121	97.0	77.9	55.3	43.5	36.0	31.1	24.9	20.5	17.3	9.08
	1.67	363	216	160	1.75	124	99.3	79.8	56.8	44.6	37.0	31.8	25.6	21.0	17.8	9.38

12-TUA-15	1.80	27.2	17.4	13.0	1.85	8.66	7.13	5.73	4.08	3.20	2.66	2.29	1.84	1.49	1.27	0.70
	1.75	29.5	18.0	13.4	1.80	9.76	7.58	6.08	4.33	3.40	2.82	2.43	1.95	1.60	1.36	0.75
	1.67	31.0	18.4	13.4	1.75	10.1	7.73	6.23	4.43	3.48	2.88	2.49	2.00	1.64	1.39	0.75
12-TUA-20	1.80	37.7	24.1	18.0	1.85	12.9	9.93	7.95	5.67	4.45	3.69	3.18	2.55	2.07	1.76	0.90
	1.75	40.9	25.0	18.6	1.80	13.5	10.5	8.45	6.02	4.73	3.92	3.38	2.71	2.22	1.88	1.00
	1.67	43.0	25.5	18.6	1.75	14.0	10.8	8.65	6.17	4.85	4.01	3.46	2.78	2.28	1.94	1.00
12-TUA-25	1.80	43.0	27.5	20.5	1.85	14.7	11.3	9.09	6.47	5.08	4.20	3.67	2.99	2.37	2.01	1.05
	1.75	46.6	28.5	21.2	1.80	15.4	12.0	9.64	6.87	5.39	4.46	3.88	3.17	2.53	2.15	1.08
	1.67	49.0	29.1	21.3	1.75	15.9	12.3	9.88	7.03	5.53	4.58	3.98	3.25	2.60	2.21	1.17
12-TUA-30	1.80	54.3	34.8	26.0	1.85	18.6	14.4	11.5	8.22	6.45	5.34	4.60	3.68	3.00	2.55	1.28
	1.75	58.9	36.0	26.8	1.80	19.5	15.2	12.2	8.72	6.84	5.66	4.88	3.90	3.20	2.73	1.38
	1.67	61.9	36.8	26.9	1.75	20.1	15.6	12.5	8.93	7.01	5.80	5.00	4.00	3.30	2.81	1.42
12-TUA-40	1.80	71.3	45.7	34.1	1.85	24.4	19.1	15.4	11.0	8.60	7.12	6.10	4.83	4.00	3.40	1.71
	1.75	77.4	47.3	35.1	1.80	25.6	20.3	16.3	11.6	9.13	7.56	6.47	5.12	4.20	3.64	1.83
	1.67	81.3	48.3	35.3	1.75	26.4	20.8	16.7	11.9	9.35	7.74	6.63	5.25	4.40	3.74	1.96
12-TUA-50	1.80	90.9	58.2	43.5	1.85	31.1	23.9	19.2	13.7	10.8	8.90	7.68	6.16	5.01	4.25	2.17
	1.75	98.7	60.3	44.8	1.80	32.7	25.4	20.4	14.5	11.4	9.44	8.15	6.53	5.36	4.55	2.29
	1.67	104	61.6	45.0	1.75	33.7	26.0	20.9	14.9	11.7	9.68	8.35	6.70	5.50	4.68	2.46
12-TUA-65	1.80	107	68.8	51.4	1.85	36.7	28.3	22.7	16.2	12.7	10.5	9.08	7.28	5.92	5.03	2.66
	1.75	117	71.2	53.0	1.80	38.6	30.0	24.1	17.2	13.5	11.2	9.63	7.71	6.33	5.38	2.71
	1.67	123	72.8	53.2	1.75	39.8	30.8	24.7	17.6	13.8	11.4	9.87	7.91	6.50	5.53	2.96
12-TUA-70	1.80	116	74.1	55.3	1.85	39.5	30.5	24.5	17.4	13.7	11.3	9.78	7.84	6.37	5.41	2.89
	1.75	126	76.7	57.0	1.80	41.6	32.3	26.0	18.5	14.5	12.0	10.4	8.31	6.82	5.79	3.12
	1.67	132	78.4	57.3	1.75	42.8	33.1	26.6	18.9	14.9	12.3	10.6	8.52	7.00	5.95	3.21
12-TUA-80	1.80	132	84.7	63.2	1.85	45.2	34.8	28.0	19.9	15.6	13.0	11.2	8.96	7.28	6.19	3.30
	1.75	144	87.7	65.2	1.80	47.5	36.9	29.7	21.1	16.6	13.7	11.9	9.50	7.79	6.62	3.21
	1.67	151	89.6	65.4	1.75	49.0	37.9	30.4	21.7	17.0	14.1	12.2	9.74	8.00	6.80	3.67
12-TUA-90	1.80	153	97.8	73.0	1.85	52.2	40.1	32.2	22.9	18.0	14.9	12.9	10.4	8.37	7.12	3.75
	1.75	166	101	75.3	1.80	54.9	42.5	34.1	24.3	19.1	15.8	13.7	11.0	9.00	7.61	3.71
	1.67	174	104	75.6	1.75	56.5	43.5	35.0	24.9	19.6	16.2	14.0	11.3	9.20	7.82	4.17
12-TUA-100	1.80	170	109	81.1	1.85	58.0	44.9	36.0	25.6	20.1	16.7	14.4	11.5	9.37	7.97	4.29
	1.75	184	113	83.6	1.80	61.0	47.6	38.2	27.2	21.4	17.7	15.2	12.2	10.0	8.52	4.54
	1.67	194	115	84.0	1.75	62.8	48.7	39.1	27.9	21.9	18.1	15.6	12.5	10.3	8.75	4.58
12-TUA-110	1.80	183	117	87.0	1.85	62.6	48.3	38.8	27.6	21.7	18.0	15.5	12.4	10.1	8.58	4.54
	1.75	199	122	89.7	1.80	65.9	51.3	41.2	29.3	23.0	19.1	16.4	13.1	10.8	9.17	4.54
	1.67	209	124	90.0	1.75	67.9	52.5	42.2	30.0	23.6	19.5	17.8	13.5	11.1	9.42	5.04
12-TUA-120	1.80	193	125	93.4	1.85	67.8	52.3	42.0	29.9	23.5	19.4	16.8	13.5	10.9	9.08	4.95
	1.75	210	129	96.3	1.80	71.3	55.4	44.5	31.7	24.9	20.6	17.8	14.3	11.7	9.73	5.00
	1.67	220	132	96.7	1.75	73.4	56.8	45.6	32.5	25.5	21.1	18.2	14.6	12.0	10.0	5.50
12-TUA-130	1.80	215	135	101	1.85	76.3	58.8	47.2	33.6	26.4	21.8	18.8	15.1	12.3	10.4	5.54
	1.75	233	140	104	1.80	77.6	62.3	50.0	35.7	28.0	23.2	20.0	16.0	13.1	11.2	5.79
	1.67	245	143	104	1.75	79.9	63.9	51.3	36.5	28.7	23.8	20.5	16.4	13.5	11.5	6.17
12-TUA-150	1.80	239	150	112	1.85	84.7	65.3	52.4	37.3	29.3	24.2	21.0	16.8	13.7	11.6	6.20
	1.75	259	155	116	1.80	86.2	69.3	55.5	39.6	31.0	25.8	22.2	17.8	14.6	12.4	6.54
	1.67	272	159	116	1.75	88.8	71.0	57.0	40.6	31.9	26.4	22.8	18.3	15.0	12.8	6.88
12-TUA-160	1.80	243	155	118	1.85	90.4	69.7	55.9	39.8	31.3	25.9	22.3	17.9	14.6	12.4	6.63
	1.75	263	161	121	1.80	91.9	73.9	59.3	42.3	33.2	27.4	23.7	19.0	15.6	13.2	7.46
	1.67	277	164	122	1.75	94.7	75.7	60.8	43.3	34.0	28.2	24.3	19.5	16.0	13.6	7.38
12-TUA-175	1.80	273	175	132	1.85	102	78.4	62.9	44.7	35.2	29.1	25.2	20.1	16.4	13.9	7.42
	1.75	296	181	137	1.80	103	83.2	66.8	47.6	37.3	30.9	26.7	21.4	17.5	14.9	7.46
	1.67	311	185	137	1.75	107	85.2	68.4	48.7	38.3	31.6	27.3	21.9	18.0	15.3	8.25
12-TUA-200	1.80	303	194	147	1.85	113	87.1	69.9	49.7	39.0	32.4	27.9	22.4	18.2	15.5	8.25
	1.75	329	201	152	1.80	115	92.4	74.0	52.8	41.5	34.4	29.6	23.7	19.5	16.5	9.50
	1.67	346	206	152	1.75	118	94.7	76.0	54.0	42.5	35.2	30.3	24.4	20.0	17.0	9.17
12-TUA-225	1.80	349	223	169	1.85	130	100	80.4	57.3	45.0	37.2	32.1	25.8	20.9	17.8	9.49
	1.75	379	231	174	1.80	132	106	85.3	60.7	47.7	39.5	34.1	27.3	22.4	19.0	10.2
	1.67	398	236	175	1.75	136	109	87.4	62.3	48.9	40.4	34.9	28.0	23.0	19.6	10.5
12-TUA-250	1.80	379	243	184	1.85	141	109	87.4	62.3	48.9	40.4	34.9	28.0	22.8	19.3	10.1
	1.75	412	251	190	1.80	144	115	92.5	66.0	51.8	42.9	37.0	29.6	24.4	20.7	10.9
	1.67	432	257	190	1.75	148	118	95.0	67.7	53.1	44.0	38.0	30.4	25.0	21.3	11.3

*Actual Battery Discharge Data may be ± 5% of figures shown.

POWER

Watts @ 25°C



SEC Bloc Type	End Volts /Cell	DISCHARGE DATA AMPS			End Volts /Cell	DISCHARGE DATA WATTS/CELL at 25°C											
		DISCHARGE TIME IN MINS				DISCHARGE TIME IN HOURS											
		15MINS	30MINS	45MINS		1hr	1.5hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	12hr	24hr	
6-TUA-120	1.80	376	238	179	1.85	133	103	83.1	59.6	47.1	39.2	33.9	27.3	22.3	19.0	9.93	
	1.75	396	241	181	1.80	139	108	87.6	63.0	49.7	41.3	35.7	28.9	23.8	20.2	10.7	
	1.67	404	243	180	1.75	141	110	88.6	63.9	50.4	41.9	36.4	29.4	24.2	20.6	10.9	
6-TUA-175	1.80	527	343	260	1.85	199	154	124	89.0	70.6	58.7	51.0	41.1	33.3	28.4	14.9	
	1.75	556	345	264	1.80	205	162	131	94.1	74.5	61.9	53.7	43.3	35.7	30.2	16.0	
	1.67	569	347	262	1.75	207	164	133	95.3	75.3	62.9	54.6	44.1	36.2	30.8	16.4	
6-TUA-200	1.80	586	381	290	1.85	222	172	138	99.4	78.5	65.4	56.5	45.7	37.3	31.7	16.6	
	1.75	619	383	292	1.80	227	181	146	105	82.9	69.0	59.6	48.0	39.7	33.6	17.8	
	1.67	632	387	291	1.75	231	183	148	106	84.0	69.9	60.6	49.0	40.3	34.3	18.2	
6-TUA-210	1.80	590	383	290	1.85	228	176	142	102	80.4	67.0	57.9	46.7	38.1	32.4	16.9	
	1.75	623	385	293	1.80	229	185	150	107	84.8	70.5	61.1	49.2	40.7	34.5	18.2	
	1.67	635	389	293	1.75	231	187	151	109	86.2	71.9	62.0	50.2	41.3	35.2	18.6	

12-TUA-15	1.80	50.3	32.7	24.5	1.85	16.6	13.7	11.1	7.95	6.28	5.24	4.53	3.65	2.97	2.53	1.40
	1.75	53.1	32.9	24.7	1.80	18.5	14.5	11.7	8.39	6.63	5.52	4.78	3.86	3.17	2.70	1.50
	1.67	54.3	33.1	24.5	1.75	18.7	14.6	11.8	8.50	6.71	5.59	4.85	3.92	3.23	2.74	1.49
12-TUA-20	1.80	69.7	45.2	33.9	1.85	24.7	19.1	15.4	11.0	8.73	7.27	6.29	5.07	4.13	3.52	1.81
	1.75	73.6	45.6	34.3	1.80	25.6	20.0	16.2	11.7	9.21	7.68	6.65	5.36	4.40	3.75	2.00
	1.67	75.3	45.9	34.0	1.75	26.1	20.4	16.4	11.8	9.37	7.79	6.74	5.44	4.49	3.83	1.99
12-TUA-25	1.80	79.6	51.6	38.6	1.85	28.1	21.7	17.6	12.6	10.0	8.27	7.25	5.94	4.73	4.01	2.11
	1.75	83.9	52.0	39.1	1.80	29.2	22.9	18.5	13.3	10.5	8.74	7.63	6.27	5.02	4.28	2.16
	1.67	85.8	52.4	39.0	1.75	29.7	23.2	18.8	13.5	10.7	8.89	7.76	6.37	5.12	4.36	2.32
12-TUA-30	1.80	100	65.3	48.9	1.85	35.6	27.7	22.2	16.0	12.7	10.5	9.09	7.30	5.98	5.10	2.56
	1.75	106	65.7	49.4	1.80	36.9	29.0	23.4	16.9	13.3	11.1	9.59	7.71	6.35	5.43	2.75
	1.67	108	66.2	49.2	1.75	37.5	29.4	23.7	17.1	13.5	11.3	9.75	7.84	6.49	5.54	2.81
12-TUA-40	1.80	132	85.8	64.2	1.85	46.7	36.8	29.8	21.4	16.9	14.0	12.1	9.59	7.98	6.80	3.43
	1.75	139	86.3	64.8	1.80	48.5	38.8	31.3	22.5	17.8	14.8	12.7	10.1	8.33	7.24	3.66
	1.67	142	86.9	64.6	1.75	49.2	39.2	31.7	22.8	18.1	15.0	12.9	10.3	8.66	7.38	3.89
12-TUA-50	1.80	168	109	81.9	1.85	59.5	46.0	37.1	26.7	21.1	17.5	15.2	12.2	10.0	8.50	4.35
	1.75	178	110	82.7	1.80	61.9	48.5	39.2	28.1	22.2	18.5	16.0	12.9	10.6	9.05	4.58
	1.67	182	111	82.4	1.75	62.9	49.0	39.7	28.6	22.6	18.8	16.3	13.1	10.8	9.22	4.88
12-TUA-65	1.80	198	129	96.7	1.85	70.2	54.4	43.9	31.6	24.9	20.7	18.0	14.5	11.8	10.0	5.34
	1.75	211	130	97.8	1.80	73.1	57.3	46.3	33.3	26.3	21.9	18.9	15.2	12.6	10.7	5.42
	1.67	215	131	97.4	1.75	74.2	58.1	46.9	33.8	26.7	22.1	19.2	15.5	12.8	10.9	5.88
12-TUA-70	1.80	215	139	104	1.85	75.6	58.6	47.3	33.9	26.8	22.3	19.3	15.6	12.7	10.8	5.80
	1.75	227	140	105	1.80	78.8	61.7	49.8	35.8	28.3	23.5	20.4	16.4	13.5	11.5	6.23
	1.67	231	141	105	1.75	79.8	62.4	50.5	36.3	28.7	23.9	20.7	16.7	13.8	11.7	6.37
12-TUA-80	1.80	244	159	119	1.85	86.5	67.0	54.0	38.8	30.6	25.5	22.1	17.8	14.5	12.4	6.62
	1.75	259	160	120	1.80	90.0	70.5	56.9	40.9	32.4	26.8	23.3	18.8	15.5	13.2	6.42
	1.67	264	161	120	1.75	91.4	71.4	57.7	41.6	32.8	27.3	23.7	19.1	15.7	13.4	7.28
12-TUA-90	1.80	283	184	137	1.85	99.9	77.1	62.1	44.6	35.3	29.4	25.5	20.6	16.7	14.2	7.53
	1.75	299	185	139	1.80	104	81.1	65.5	47.1	37.2	31.0	26.8	21.7	17.9	15.1	7.42
	1.67	305	187	138	1.75	105	82.0	66.3	47.8	37.8	31.5	27.3	22.1	18.1	15.4	8.28
12-TUA-100	1.80	315	205	153	1.85	111	86.3	69.6	49.9	39.4	32.9	28.4	22.9	18.7	15.9	8.61
	1.75	331	206	154	1.80	116	90.9	73.3	52.7	41.6	34.7	29.9	24.1	19.8	16.9	9.08
	1.67	340	207	154	1.75	117	91.9	74.2	53.4	42.3	35.2	30.4	24.5	20.3	17.3	9.10
12-TUA-110	1.80	339	220	164	1.85	120	92.9	75.0	53.8	42.6	35.4	30.6	24.6	20.1	17.2	9.11
	1.75	358	223	165	1.80	125	97.9	79.0	56.8	44.9	37.3	32.2	25.9	21.4	18.2	9.08
	1.67	366	223	165	1.75	127	99.0	80.1	57.5	45.6	37.9	34.7	26.5	21.8	18.6	10.0
12-TUA-120	1.80	357	235	176	1.85	130	101	81.1	58.2	46.0	38.2	33.2	26.8	21.7	18.2	9.93
	1.75	378	235	178	1.80	135	106	85.4	61.4	48.6	40.4	35.0	28.2	23.2	19.4	10.0
	1.67	385	238	177	1.75	137	107	86.5	62.3	49.3	41.0	35.4	28.6	23.6	19.7	10.9
12-TUA-130	1.80	398	253	190	1.85	146	113	91.2	65.5	51.8	42.9	37.2	30.0	24.5	20.8	11.1
	1.75	419	256	192	1.80	147	119	96.0	69.1	54.6	45.4	39.3	31.6	26.0	22.2	11.6
	1.67	429	257	190	1.75	149	120	97.4	70.0	55.4	46.2	40.0	32.1	26.6	22.7	12.2
12-TUA-150	1.80	442	282	211	1.85	162	126	101	72.8	57.4	47.7	41.5	33.3	27.3	23.2	12.4
	1.75	466	283	214	1.80	163	132	107	76.7	60.5	50.5	43.6	35.1	29.0	24.7	13.1
	1.67	476	286	212	1.75	166	134	108	77.9	61.6	51.3	44.4	35.8	29.5	25.2	13.7
12-TUA-160	1.80	450	291	222	1.85	173	134	108	77.6	61.3	51.0	44.2	35.5	29.1	24.8	13.3
	1.75	473	294	223	1.80	174	141	114	81.9	64.7	53.7	46.5	37.6	31.0	26.3	14.9
	1.67	485	295	223	1.75	177	143	115	83.0	65.7	54.8	47.4	38.2	31.5	26.8	14.6
12-TUA-175	1.80	505	328	248	1.85	195	151	122	87.1	69.1	57.3	49.8	40.0	32.7	27.8	14.9
	1.75	533	330	253	1.80	195	159	128	92.2	72.6	60.5	52.4	42.3	34.7	29.6	14.9
	1.67	544	333	251	1.75	200	161	130	93.3	73.9	61.4	53.2	42.9	35.4	30.2	16.4
12-TUA-200	1.80	561	364	277	1.85	216	168	135	96.8	76.5	63.8	55.2	44.5	36.3	31.0	16.6
	1.75	592	367	280	1.80	218	176	142	102	80.9	67.4	58.2	46.9	38.7	32.8	19.0
	1.67	606	371	278	1.75	220	178	144	104	82.1	68.4	59.1	47.8	39.4	33.5	18.2
12-TUA-225	1.80	646	419	318	1.85	249	192	155	112	88.3	73.3	63.5	51.2	41.7	35.5	19.0
	1.75	682	422	321	1.80	250	202	164	118	93.0	77.4	67.0	53.9	44.4	37.8	20.4
	1.67	697	425	320	1.75	254	205	166	119	94.5	78.5	68.0	54.9	45.3	38.6	20.9
12-TUA-250	1.80	701	456	346	1.85	270	209	169	121	95.9	79.6	69.0	55.6	45.5	38.6	20.3
	1.75	742	458	351	1.80	273	220	178	128	101	84.0	72.7	58.6	48.4	41.1	21.8
	1.67	756	463	348	1.75	276	222	180	130	103	85.4	74.1	59.6	49.2	41.9	22.3

DIMENSIONS

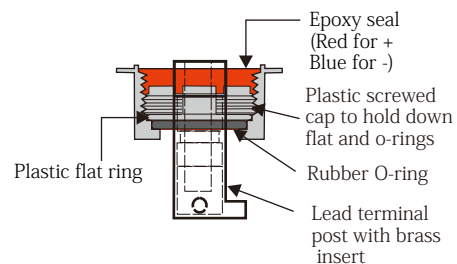
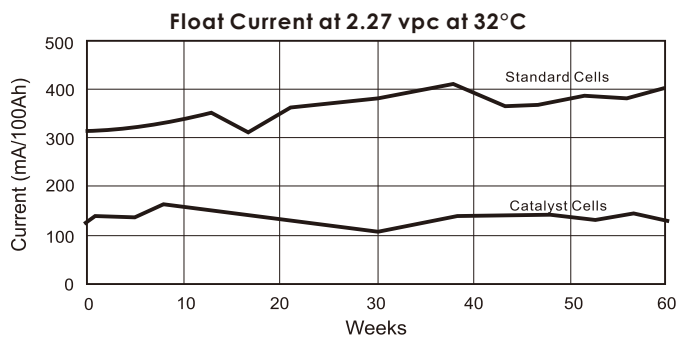


Dimensions, Weights, Data

SEC Battery Type	Capacity C/10 1.80 Vpc	Short Circuit Amps	Internal resistance m Ohms	Femal Terminal Type	Battery Weight		Overall Length		Battery Width		Dimensions Height	
					KG	lbs	Inch	mm	Inch	mm	Inch	mm
6-TUA-120	120	3200	3.0	FT4	17.3	38.1	7.72	196	6.69	170	8.43	214
6-TUA-175	180	4600	2.4	FT5	26.0	57.3	12.0	306	6.61	168	9.06	230
6-TUA-200	200	5000	2.3	FT5	31.5	69.4	12.7	323	7.01	178	9.06	230
6-TUA-210	205	5500	2.2	FT5	35.0	77.2	9.57	243	7.40	188	10.8	275

12-TUA-15	16.0	650	14	FT2	6.00	13.2	7.09	180	2.99	76	6.57	167
12-TUA-20	22.2	940	12	FT3	8.52	18.8	7.09	180	2.99	76	6.57	167
12-TUA-25	25.3	1220	8.2	FT3	9.40	20.7	7.09	180	2.99	76	6.57	167
12-TUA-30	32.0	1500	7.3	FT3	10.5	23.1	7.72	196	5.16	131	6.30	160
12-TUA-40	42.0	1700	6.0	FT3	14.7	32.3	7.80	198	6.54	166	6.69	170
12-TUA-50	52.3	1900	5.6	FT3	18.5	40.7	9.06	230	5.43	138	8.27	215
12-TUA-60	63.3	2000	5.5	FT3	22.0	48.4	13.8	350	6.57	167	7.05	179
12-TUA-70	66.2	2100	5.4	FT3	25.7	56.5	10.2	259	6.65	169	8.46	215
12-TUA-80	77.9	2400	4.5	FT3	26.5	58.4	10.2	259	6.65	169	8.46	215
12-TUA-90	90.0	2650	4.3	FT4	28.0	61.7	12.1	307	6.69	170	8.46	215
12-TUA-100	100	2900	3.9	FT4	31.0	68.2	12.9	328	6.77	172	8.46	215
12-TUA-110	108	3000	3.4	FT4	31.5	69.3	12.9	328	6.77	172	8.46	215
12-TUA-120	117	3300	3.1	FT4	32.5	76.7	13.5	342	6.81	173	11.22	285
12-TUA-130	131	4200	2.9	FT4	42.0	92.4	13.5	342	6.81	173	11.22	285
12-TUA-150	146	4500	2.8	FT5	47.0	103	19.0	483	6.69	170	9.45	240
12-TUA-160	156	4500	2.6	FT5	52.0	114	20.9	530	8.23	209	9.06	230
12-TUA-175	175	4700	2.3	FT5	56.7	125	20.9	530	8.23	209	9.06	230
12-TUA-200	195	5400	2.2	FT5	63.0	139	20.6	522	9.45	240	8.86	225
12-TUA-225	224	6157	2.0	FT5	68.0	150	20.6	522	10.59	269	8.86	220
12-TUA-250	244	6464	1.9	FT5	76.0	167	20.6	522	10.59	269	9.06	230

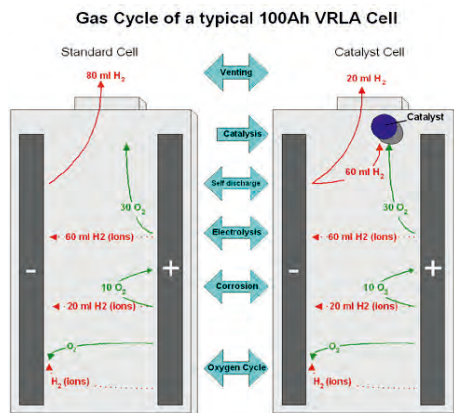
*Actual Dimension may be $\pm 5\%$ from the figures shown.



Gas Cycle of a typical 100Ah VRLA Cell

Standard Cell

Catalyst Cell



Female Terminal Type Ft5 18 Dia. Inserts for M8 Bolt



TYPICAL TRIPLE BARRIER POST SEAL DETAIL

The Worlds First - Monobloc Catalyst Battery

SEC CELLYTE TUA Monobloc batteries are the first to use a CatVent Catalyst in the cell head space. This is done for several very good reasons. The Catalyst changes the electrochemical actions within the cell, this causes balance within the cell preventing the negative plate from depolarising over time and improves cell capacity. A healthy balance in the cell will be immediately obvious by a reduction of the cell's float current by up to 50%. What that means is a dramatic reduction, by up to 80% in cell gassing, reduced loss which delays cell dry out*, reduced positive plate corrosion, reduced cell heating, reducing the risk of thermal run away and a reduction in the energy required to cool the cells / batteries.

*Please note: Battery dry out is one of the major failure modes of VRLA batteries.

How It Works

The VRLA cell was designed to correct all the problems of flooded technology. All the gas produced inside the cell was intended to recombine back into water on the negative plate self discharge, no positive plate corrosion and no excess charge current needed. Batteries would last forever and go gas would be released from the cell.

In the real world, chemistry dictates that negative plates do self-discharge and they do this more when impurities are present in higher quantities. In our experience the typical high quality, long life (20 yr) VRLA cell has a self discharge rate equivalent to 80ml of Hydrogen gas per day per 100Ah. Oxygen, produced from a variety of processes on the positive plate, will recombine with this hydrogen on the negative plate and cause it to depolarize.

In the real world positive grids also corrode. Designers have done what is typically done on flooded designs for long life and reduced the corrosion rate of the positive grid. Typical state of the art designs will only absorb 10 ml of oxygen on the positive plate instead of the 40ml needed to counter act the hydrogen generated on the negative. This is the paradox of VRLA design. A "better" positive grid can actually impair the life of the design.

This leaves an unbalanced situation with a strongly depolarized negative plate. The charging system will compensate with more current which will lead to excessively high polarization on the positive plate and damaging effects on the cell to the excess current. Electrolysis will generate effects on the cell due to the excess current.

Adding a Microcat™ to the cell gives battery designer a new tool to break out of the deadlock. The catalyst will absorb free oxygen in the headspace and recombine it with the amount of gas venting from the cell, but most importantly this prevents oxygen from reaching the negative plate and buffers the negative plate self discharge reaction from the positive plate corrosion reaction. Now that the cell is in balance the negative remains charged. The charging system responds by only sending the small amount of current needed to keep the cell charged.

Benefits of Catalyst in SEC VRLA Batteries

One of the most immediate, observable effects of installing a catalyst in a VRLA cell is a sudden drop in the float current. Typically float currents are one half or less when a catalyst is installed. Adding a catalyst to the cell prevents some of the oxygen reaching the negative plate and allows the negative plate to stay polarized. This means that less current needs to be supplied to the cell from the charging system, manifesting itself as lower float current, leading to the following benefit:

*Minimize water loss

Gasses are recombined into water inside the cell rather than exiting the cell. Too much gas leaving the cell can lead to premature dry-out and cell failure. Cell dry out is a major cause of VRLA cell failure.

*Increase life

There are many potential failure modes of VRLA cells. A number of these failure modes can be mitigated by the catalyst technology such as: Cell dry out, positive plate corrosion, thermal runaway, capacity loss due to negative plate depolarization.

*Minimize positive plate corrosion

A reduction in float current reduces the amount of over-charge on the positive plate which directly impacts the corrosion rate. The design life of a lead acid battery is based on the corrosion of the plate barring any other unforeseen failure modes.

*Maintain cell capacity

Many VRLA cells in service are failing capacity tests because their negative plates are depolarized. In fact significant capacity increase have been seen on some cells just by installing a catalyst.

SEC ALL PRODUCT RANGE



CELLYTE 2CMT/G
Modular Steel Rack



CELLYTE 2TLAM/G
Tubular Steel Rack



CELLYTE 2CMT/G, CELLYTE 2TLAM/G
with Catalyst



CELLYTE 12PLF & 12PLT Range



CELLYTE 12FTA/G Range



CELLYTE 6-12TUA Range



CELLYTE 6-12TSG Range



CELLYTE 6-12TLA Range



CELLYTE 6-12TLG Range



MICROLYTE +Plus Range



MICROLYTE Red Top Range



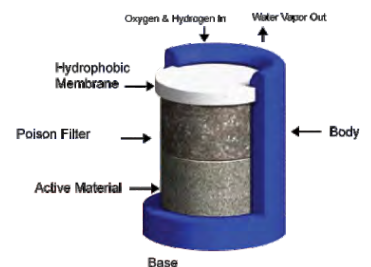
CELLYTE 2ETG OPzV Range
Tubular Steel Rack



CELLYTE TRA Range



Nickel Cadmium Range
Pocket Plate flooded and VR



Typical VRLA catalyst

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