

TM12-620W

12V 135Ah(20hr)

High Rate Discharge

The ABT Thunder TM...W VRLA are batteries according to Eurobat Classification and specially designed for applications which need high power backup.

Thunder TM...W is the premium plus VRLA battery for UPS and diesel start application.

Mechanical Characteristics

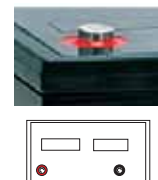
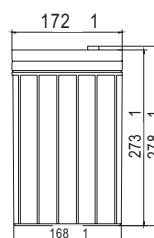
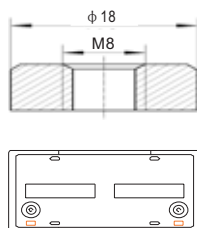
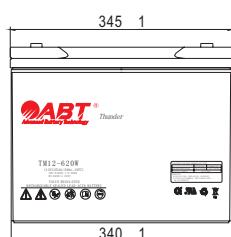
	SI Units	English Units
Length	345mm	13.58inch
Width	172mm	6.77inch
Height	273mm	10.75inch
Total Height	278mm	10.94inch
Approx. Weight	45.00kg	99.23lbs

Type of material for box and lids :
ABS Standard (FV0 Optional)

Product Characteristics

- Positive and negative grids in lead-calcium tin alloy
- Superior energy density
- More than 40% power output than ABT standard SGP series
- Operates at a low internal pressure
- Usable in any orientation
- A recognized component of UL
- Range of 6V and 12V monobloc from 160W to 1000W per cell for 10' @ 1.60Vpc
- 6 months shelf life at 20°C
- 10 years design life

Dimensions / Terminal



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Nominal Capacity 68°F(20°C)	10 min wattage @ 1.60V/620W per cell 1 hour rate (90.43A, 1.60V per cell)90.43 Ah 10 hour rate (12.63A, 1.75V per cell)126.3Ah 20 hour rate (6.75A, 1.75V per cell) 135Ah
Internal Resistance	Fully Charged battery 68°F(20°C) 3.2 mOhms
Mass Energy(Wh/kg)	36.0
Volumic energy(Wh/L)	100.88
Self-Discharge	3% of capacity declined per month at 20°C(average)
Operating Temperature Range	Discharge -20~60°C Charge -10~60°C Storage -20~60°C
Max. Discharge Current	1200A(5s)
Short circuit current	3750A
Charge Methods:	Constant Voltage Charge 68°F(20°C) Cycle use 14.4-15.0V/unit Temperature compensation -30mV/°C/unit Standby use 13.5-13.8V/unit Temperature compensation -20mV/°C/unit Maximum charging current 10.5 A of rated capacity
Terminal Type	Inserted Thread and bolt M8X φ 18
Torque strength in Nm	12~16
Handle Type	Plastic
Flame arrestor	Yes

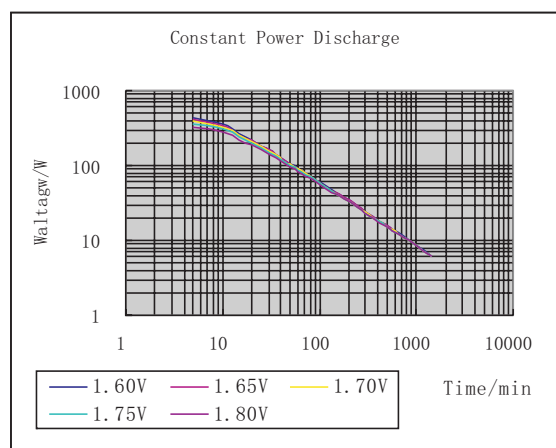
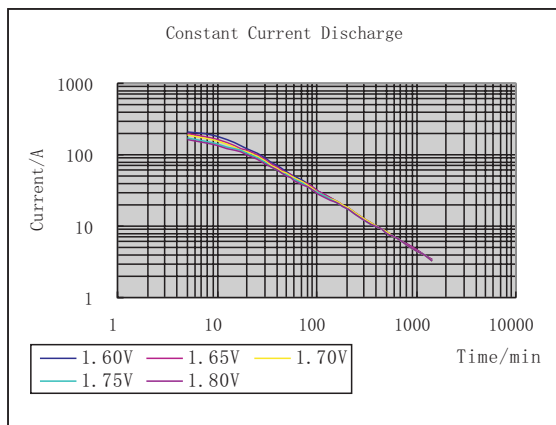
Constant Current Discharge Data (Amperes at 20°C)

End Volt. Per Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	440.0	337.0	255.7	207.1	175.0	152.5	136.3	124.0	114.2	102.8	90.43	66.26	52.32	43.28	36.06	28.85	23.60	20.02	17.64	15.74	14.24	12.96	11.26	6.10
1.65V	410.3	317.1	242.0	199.0	170.0	148.4	133.0	121.5	111.4	100.2	88.29	64.72	51.16	42.22	35.40	28.12	23.15	19.77	17.46	15.60	14.12	12.84	11.17	6.01
1.70V	384.2	296.8	229.0	192.1	164.6	144.3	129.5	118.5	108.1	96.8	85.69	62.61	49.91	41.26	34.61	27.42	22.71	19.47	17.29	15.47	14.05	12.75	11.07	5.93
1.75V	359.3	277.2	217.9	184.1	159.0	139.8	125.5	115.1	104.4	93.8	83.67	60.40	48.57	40.49	33.98	26.72	22.25	19.18	17.07	15.30	13.90	12.63	10.94	5.82
1.80V	332.7	259.3	208.2	176.7	153.7	135.4	121.4	111.6	101.1	91.4	81.00	58.47	47.22	39.82	33.28	26.00	21.78	18.90	16.90	15.14	13.74	12.49	10.83	5.74

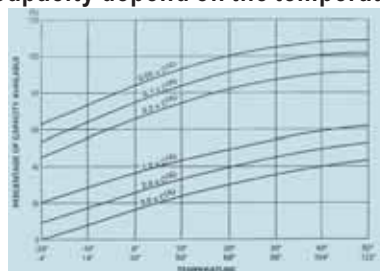
Constant Power Discharge Data (Watts per cell at 20°C)

End Volt. Per Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	740.0	620.0	483.4	397.7	338.6	295.3	262.9	237.9	216.9	199.0	173.61	125.40	99.40	81.78	68.30	56.10	46.50	39.39	34.53	30.71	27.84	25.32	21.86	11.88
1.65V	700.6	588.8	464.0	387.0	330.4	288.9	259.1	234.2	213.7	196.6	171.50	123.20	98.27	80.62	67.39	55.32	45.88	38.98	34.24	30.48	27.57	25.06	21.65	11.76
1.70V	674.7	566.7	445.3	375.1	321.3	282.5	254.2	230.2	210.0	193.9	168.80	121.30	96.61	79.62	66.56	54.35	45.22	38.62	33.94	30.24	27.34	24.79	21.42	11.64
1.75V	642.0	534.6	428.0	361.8	312.1	274.9	248.7	224.7	206.1	190.7	166.10	119.30	95.01	78.61	65.88	53.51	44.60	38.17	33.59	29.96	27.12	24.61	21.24	11.49
1.80V	612.8	509.3	410.3	347.5	303.2	267.7	242.7	220.4	201.5	187.5	163.50	117.10	93.40	77.50	65.32	52.60	43.89	37.64	33.11	29.62	26.80	24.43	21.07	11.39

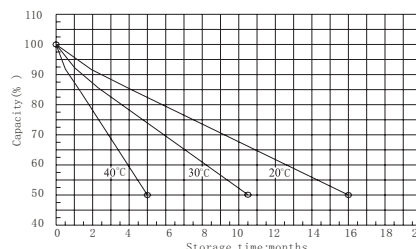
Performance drawing



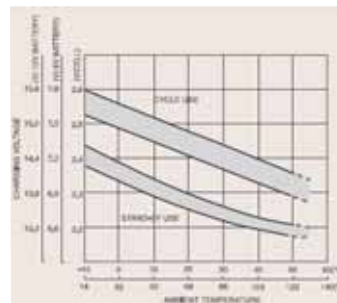
Capacity depend on the temperature



Capacity Retention Characteristic



Charge voltage depend on the temperature



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ABT VRLA Battery: Available Power Range From 7Ah to 3000Ah

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