

## HR12475W (12V475 Watts/cell)

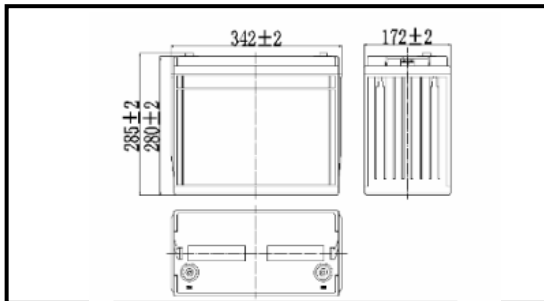
### Valve Regulated Lead Acid Battery



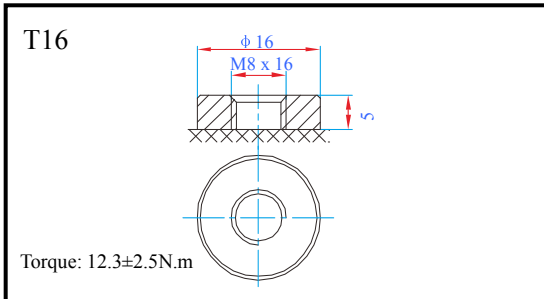
#### Specifications

Nominal voltage	12V (6 cells per unit)	
Rated capacity (15min. rate)	475 Watts/cell /1.67V	
Dimensions	Length	342±2mm (13.46inch)
	Width	172±2mm (6.77inch)
	Height	280±2mm (11.02inch)
	Total height	285±2mm (11.20inch)
Approx. weight	44.00kg (97.00lbs)±3%	

#### Outer dimensions (mm)



#### Terminal type (mm)



#### Characteristics

Capacity (25°C)	15min. rate	475 Watts/cell /1.67V
	10HR	135Ah/10.8V
Terminal type		T16
Internal resistance (Fully charged, 25°C)		Approx. 3.8mΩ
Capacity affected by temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 months	Remaining capacity: 91%
	6 months	Remaining capacity: 82%
	12 months	Remaining capacity: 65%
Nominal operating temperature		25°C±3°C (77°F±5°F)
Operating temperature range	Discharge	-15°C~50°C (5°F~122°F)
	Charge	-10°C~50°C (14°F~122°F)
	Storage	-20°C~50°C (-4°F~122°F)
Float charging voltage (25°C)		13.50 to 13.80V Temperature compensation: -18mV/°C/Block
Cyclic charging voltage (25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C/Block
Maximum charging current		38A
Maximum discharge current		1050A (5 sec.)
Design life	10 years for floating (25°C)	
	Eurobat (20°C): 10-12 years, long life.	

#### Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper

#### Constant current discharge characteristics unit: Ampere/cell (at 25°C, 77°F)

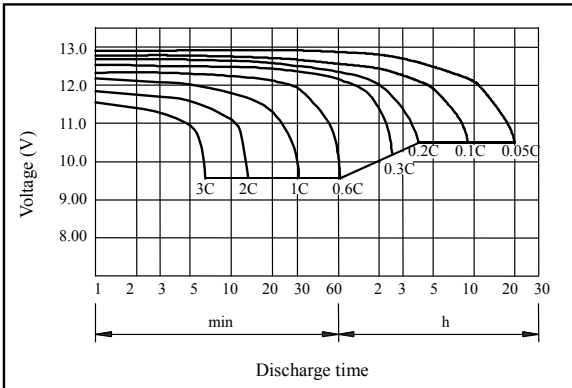
F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	335.17	261.67	215.34	163.24	115.73	87.50	50.10	35.90	28.90	25.20	21.50
1.67V/cell	320.04	253.43	206.86	157.57	112.49	85.30	49.60	35.60	28.70	24.90	21.30
1.70V/cell	308.14	246.22	202.61	155.30	110.32	84.00	49.30	35.50	28.60	24.80	21.20
1.75V/cell	298.41	237.98	196.25	150.77	107.51	82.30	48.60	35.20	28.40	24.70	21.10
1.80V/cell	282.19	224.58	185.64	146.23	103.62	79.80	47.30	34.20	27.50	23.90	20.50

#### Constant power discharge characteristics unit: Watt/cell (at 25°C, 77°F)

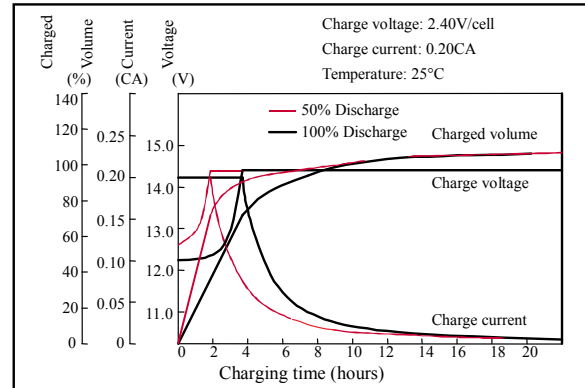
F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	637.38	499.80	415.87	309.36	228.22	169.00	97.60	70.70	57.00	49.80	42.60
1.67V/cell	607.91	475.00	398.90	299.34	220.50	165.00	96.80	70.10	56.50	49.40	42.20
1.70V/cell	592.63	470.22	391.47	293.78	217.19	162.00	96.20	69.80	56.30	49.20	42.10
1.75V/cell	566.44	453.90	377.68	287.10	211.68	159.00	94.70	69.40	55.90	48.80	41.80
1.80V/cell	534.79	430.44	357.52	275.97	203.96	154.00	92.30	67.30	54.20	47.40	40.50

Note 1: Above characteristics data can be obtained within three charge and discharge cycles.

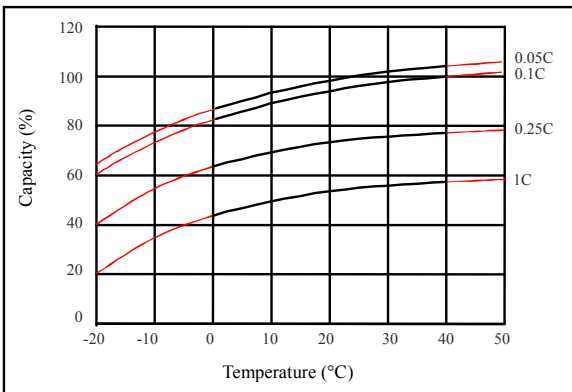
### ● Discharge characteristics (25°C)



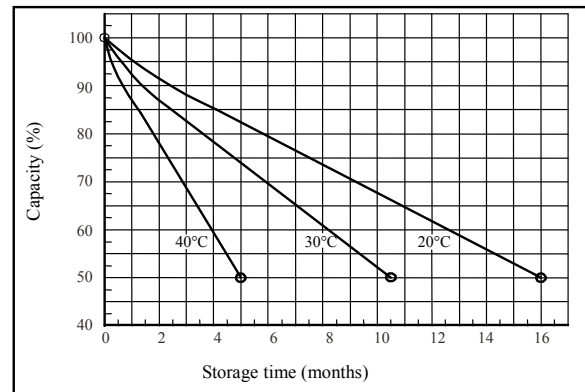
### ● Charging characteristics (25°C)



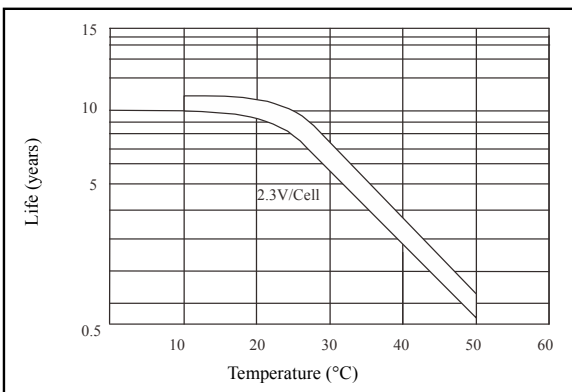
### ● Temperature effects on capacity



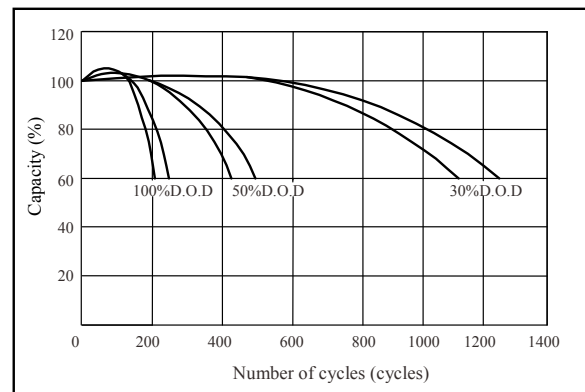
### ● Self-discharge characteristics



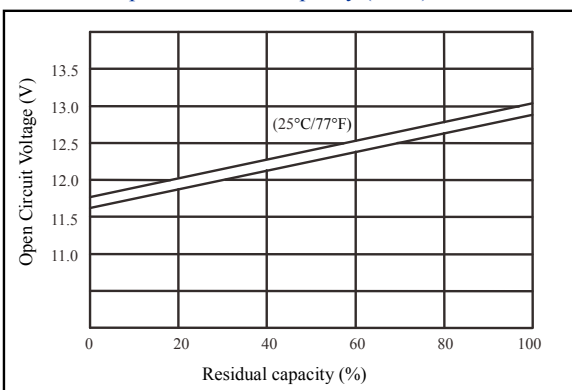
### ● Floating life on temperature



### ● Cycle life on D.O.D (25°C)



### ● Relationship for OCV and capacity (25°C)



### ● Relationship for charging voltage and temperature

