

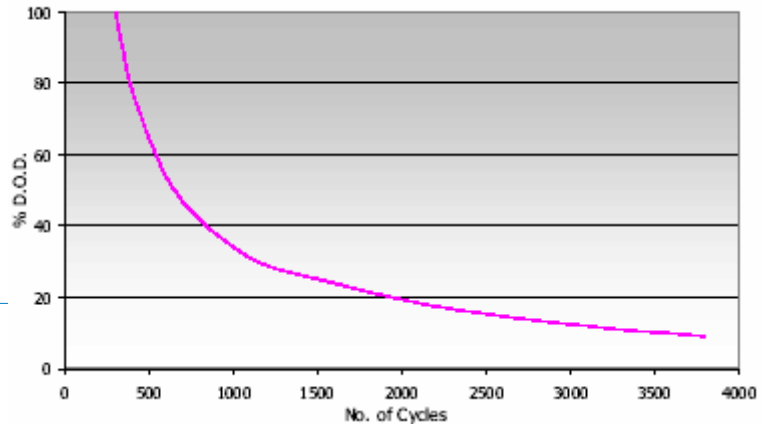
CTC 33 - 12 EV Valve Regulated Lead Acid battery.
designed for cyclic use (450 cycles)
12 Volts 33 Ah (C20)

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for watering
- Fully tank formed plates
- Analytical Grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2.5 psi
- Multi-position usage
- ABS Case and cover - V0 on request
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 896-2, DIN 43534, BS 6290 Pt4, Eurobat.



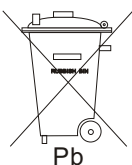
Gel Battery Cycle Life Vs. Depth of Discharge (DOD)



Specifications

Nominal Voltage	12 Volts
Nominal Capacity	33Ah (C20 @ 20 °C)
Design Life	for cyclic use (450 cycles)
Operating Temperature	-20 °C to 50 °C
Grid alloy	Calcium / Tin lead alloy
Plates	Flat Pasted
Separator	Microporous polymer
Active material	Very high purity lead
Case and cover	ABS (VO on request)
Charge Voltage	Float 2.25 - 2.30 VPC @25 °C Cycliing 2.35 @25 °C Max. 2.4 VPC Max ripple 0.05C (A)
Electrolyte	Gelled Sulphuric acid Analytical grade purity
Venting Valve	EPDM Rubber 1.5 to 2 psi (10.5 - 14 KPa) release pressure. Resealing at 1 psi (7 KPa)
Terminal	Epoxy sealed by extended mechanical paths

Sealed Lead Acid 12 Volt Bloc GEL Range
PRODUCT SHEET CTC 33-12 EV



CTM GmbH keenly encourages environmental awareness; PLEASE follow guidelines for the recycling /disposal of lead.

Website: www.ctm-berlin.de
E mail : info@ctm-berlin.de

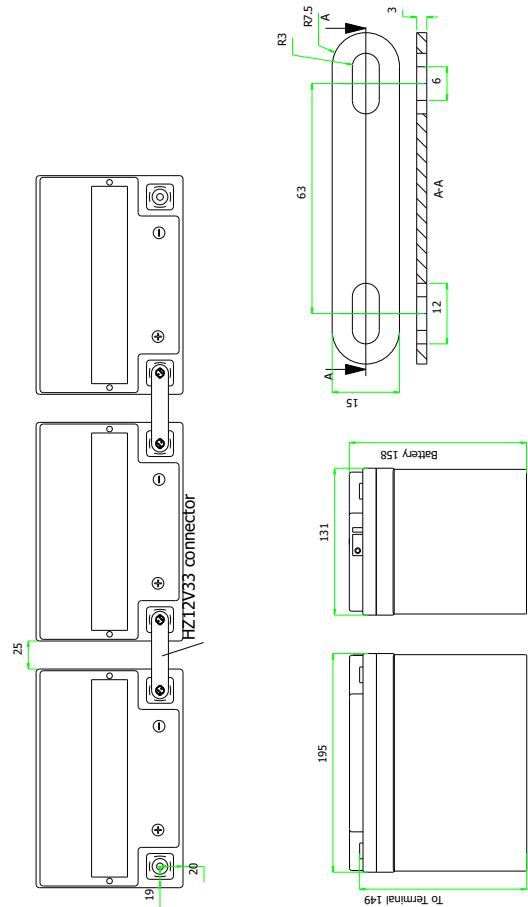
**12V
Gel**

Specifications

Nominal Voltage		12V	
Nominal Capacity		33 Ah	
Dimensions	Total Height (Inc. terminals)	160 mm	6.30 inches
	Length	195 mm	7.68 inches
	Width	130 mm	5.12 inches
	Weight	10.9 Kg	24.09 lbs

Characteristics

Capacity 20 °C (68 °F) To 1.7 volts	20 hour rate	31.6 Ah
	10 hour rate	27.7 Ah
	5 hour rate	24.4 Ah
	1 hour rate	19.5 Ah
	15 min rate	13.3 Ah
	Internal Resistance	8.5 mOhms
Capacity correction for Temperature Variations (C20)	40 °C (104 °F)	102%
	20 °C (68 °F)	100%
	0 °C (32 °F)	85%
	-15 °C (5 °F)	65%
Self-Discharge 20 °C (68 °F)	Capacity after 1 months storage	98%
	Capacity after 3 months storage	94%
	Capacity after 6 months storage	86%
Short Circuit Current 20 °C (68 °F)	1100	
Terminal	Standard	14mm Insert M6 thread
	Optional	Cu Flag Lead Flag
Charging (Constant Voltage)	Cyclic	2.35 - 2.40 VPC (20-25 °C)
	Float	2.27 - 2.30 VPC (15-25 °C)



Constant Power Discharge - Watts per Cell @20 °C

End V per Cell	5M	10M	15M	20M	25M	30M	35M	40M	45M	60M	90M	2 hr	3 hr	4 hr
1.85	144	112	89.7	75.0	65.7	58.9	52.9	48.3	44.2	35.2	25.1	19.4	13.4	10.7
1.80	158	120	92.6	78.9	68.0	60.3	54.5	49.2	45.3	36.2	25.6	19.8	13.8	11.0
1.75	163	123	95.8	80.3	68.7	61.3	54.7	49.5	45.5	36.5	25.7	19.9	13.9	11.0
1.70	165	124	96.6	82.0	70.0	62.3	55.3	50.1	45.8	36.8	25.9	20.1	14.2	11.4
1.65	167	125	97.3	82.8	70.8	62.6	55.7	50.4	46.3	37.1	26.3	-	-	-
1.60	173	127	98.8	83.6	71.5	63.4	56.4	51.0	46.7	37.5	26.4	-	-	-

Constant Amps Discharge - Amps @20 °C

End V per Cell	5M	10M	15M	20M	25M	30M	35M	40M	45M	60M	90M	2 hr	3 hr	4 hr	5 hr	8 hr	10 hr	12 hr	20 hr
1.85	77.1	59.8	47.9	39.9	34.9	31.1	27.9	25.4	23.2	18.4	13.0	10.0	6.88	5.44	4.56	3.18	2.62	2.28	1.52
1.80	86.3	65.1	50.1	42.5	36.4	32.2	29.0	26.1	23.9	19.0	13.3	10.3	7.10	5.64	4.71	3.29	2.69	2.34	1.55
1.75	90.1	67.3	52.3	43.6	37.1	32.9	29.2	26.3	24.1	19.2	13.5	10.3	7.19	5.67	4.74	3.30	2.71	2.35	1.56
1.70	92.0	68.5	53.1	44.8	38.0	33.6	29.7	26.8	24.4	19.5	13.6	10.5	7.36	5.86	4.88	3.38	2.77	2.40	1.58
1.65	93.5	69.5	53.7	45.3	38.5	33.9	30.0	27.0	24.7	19.6	13.8	-	-	-	-	-	-	-	-
1.60	97.1	71.0	54.7	45.9	39.0	34.4	30.4	27.4	24.9	19.9	13.9	-	-	-	-	-	-	-	-

Ampere Hour @20 °C

End V per Cell	2 hr	3 hr	4 hr	5 hr	8 hr	10 hr	12 hr	20 hr
1.85	20.0	20.6	21.8	22.8	25.4	26.2	27.4	30.4
1.80	20.5	21.3	22.6	23.6	26.3	26.9	28.1	31.1
1.75	20.7	21.6	22.7	23.7	26.4	27.1	28.2	31.2
1.70	20.9	22.1	23.4	24.4	27.1	27.7	28.8	31.6



UL Recognised
Component
MH28512

