



# TRUE FRONT ACCESS

TEL 12-105 FNSGC, TEL 12-115FNGC,  
TEL 12-170FGC, TEL 12-210FGC



## Valve Regulated Lead Acid Battery

Designed for telecom cycling power applications,  
Optimized for unstable electrical networks.



Typical Hybrid Remote Site

- TRUE Performance - 100% out of box capacity ratings at installation
- TRUE Front Access Terminals - ensuring reliability & connection versatility
- TRUE High Energy Density - highest true energy density solution in the market
- TRUE Long life design - Telcordia SR-4228 industry leading over 10 year service life
- TRUE Flexibility - multiple models to fit each customers power system demands



### APPLICATIONS:

- unstable networks
- Wireline
- Wireless
- Customer Premise / PBX
- Broadband
- Microwave Repeater
- Fiber Optic Regen Sites

### INDOOR / OUTDOOR INSTALLATIONS

- Sealed Cabinet Systems
- Rack Systems

## FEATURES AND BENEFITS

#### Long life cycle service design:

- Proven C&D DCS plate technology,
- Maximum cycle life for deep cycle & hybrid applications,
- High charge acceptance for rapid recharge.

#### True front access design:

- True direct connect terminal for reliability
- C&D Ohmic Ring for accurate testing
- Optional true front access gas collection system for sealed cabinet installation,
- Connection versatility

#### Maximum performance:

- Superior output due to direct terminal connection,
- Low internal resistance.

#### Compliant to major global specifications:

- British Standard BS 6290: Part 4:1997,
- IEC 60896-21/22
- Telcordia SR-4228,
- Eurobat Guide Classification: long life,
- Bellcore GR-63-CORE & GR-1089-Core
- UL94 V-0FR,
- Non-hazardous, not restricted for any transportation mode (air, water or land)

## Specifications

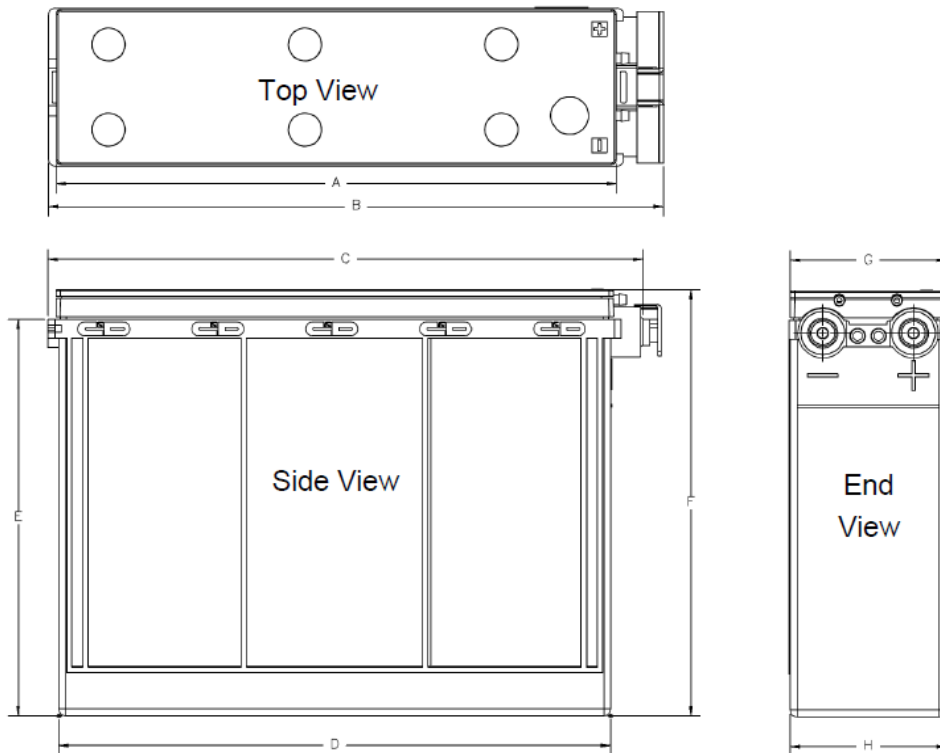
12 Volt Ampere Hour Capacity

Ampere Hour Capacity to 1.75 Volts per Cell at 25°C (77°F)  
Discharge in Hours

Model	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
TEL 12-105 FNSGC	55.2	64.5	70.1	74.9	78.5	81.7	84.8	86.0	87.1	88.2	90.3	92.2	93.9	95.4	95.6	97.5	102.0	100.6	102.4
TEL 12-115 FNGC	57.8	67.5	73.4	78.5	82.2	85.5	88.8	90.0	91.2	92.3	94.6	96.6	98.3	99.9	100.1	102.1	106.8	105.3	107.2
TEL 12-170 FGC	89.2	104.2	113.4	121.1	126.9	132.0	137.1	139.0	140.9	142.5	146.1	149.1	151.8	154.3	154.5	157.7	164.9	162.6	165.6
TEL 12-210 FGC	109.1	127.5	138.7	148.2	155.2	161.5	167.7	170.0	172.3	174.3	178.7	182.4	185.8	188.7	189.1	192.9	201.8	198.9	202.6

Battery Model	Voltage Per Unit	Ampere Hours Capacity 8 Hour Rate @ 77°F (25°C) to 1.75EPV per cell	Ampere Hours Capacity 10 Hour Rate @ 68°F (20°C) to 1.80EPV per cell	IEC Short Circuit Current (A)	IEC Resistance (mOhms)	Midtronics / Mhos	Weight kg
TEL 12-105FNSGC	12V	86	85	1897.5	6.6	1050.0	33.0
TEL 12-115FNGC	12V	90	89	2164.6	5.7	1090.0	34.4
TEL 12-170FGC	12V	139	138	2554.0	4.9	1400.0	50.9
TEL 12-210FGC	12V	170	168	2895.8	4.3	1600.0	60.6

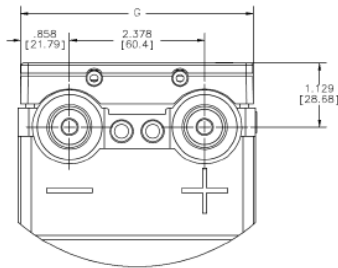
## Dimensions



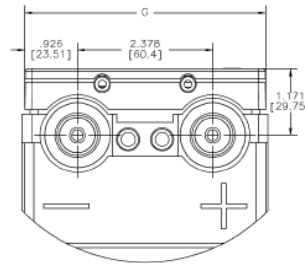
- Front access to connections:
- Eases installation,
  - Improves safety for maintenance,
  - Increases overall power density.

Model	A		B		C		D		E		F		G		H	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
TEL 12-105FNSGC	14.70	373.32	16.14	410.00	15.66	397.74	14.53	369.01	10.52	267.28	11.36	288.50	4.20	106.62	4.09	103.99
TEL 12-115FGC	18.63	473.31	20.10	510.53	19.62	498.28	18.49	469.54	8.47	215.22	9.31	236.45	4.33	109.98	4.25	107.95
TEL 12-170FGC	20.30	515.59	21.99	558.52	21.52	546.51	20.16	512.17	10.59	268.86	11.22	284.95	4.95	125.73	4.86	123.39
TEL 12-210FGC	20.29	515.47	21.99	558.52	21.52	546.51	20.16	512.17	12.22	310.31	12.91	327.85	4.95	125.73	4.86	123.39

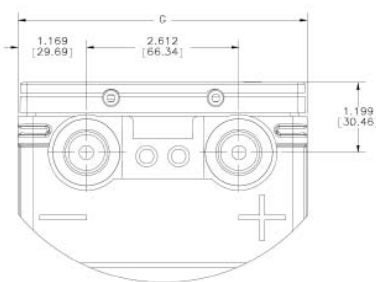
## Detail of Terminal



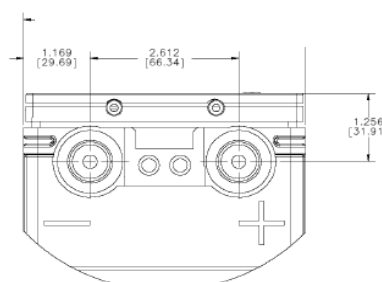
**TEL 12-105FNSGC**



**TEL 12-115FNGC**



**TEL 12-170FGC**



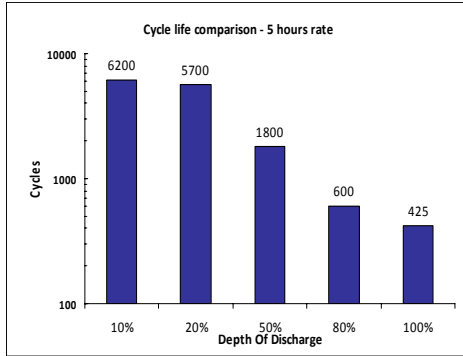
**TEL 12-210FGC**

\*All dimensions are for reference only. Contact a C&D Representative for complete dimensional information.

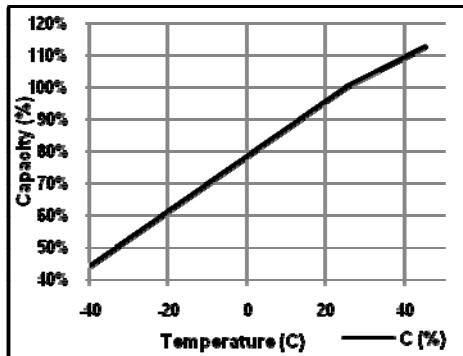
## Specifications

<b>Operating Temperature Range with temperature compensation</b>	Discharge: -40° C (-40° F) to + 71° C (160° F) Charge: -23° C (-10° F) to + 60° C (140° F)
<b>Nominal Operating Temperature Range</b>	20° C (+68° F) to + 35° C (95° F)
<b>Recommended Maximum Charging Current Limit</b>	0.2 C <sub>8</sub>
<b>Float Charging Voltage</b>	13.65 ± 0.15 VDC average per 12V unit
<b>Maximum AC Ripple (Charger)</b>	0.5% RMS or 1.5% P-P of float charge voltage recommended for best results. Max voltage allowed = 1.4% RMS (4% P-P) Max current allowed = C/20
<b>Self Discharge</b>	Battery can be stored up to 6 months at 25° C (77° F) before a freshening charge is required. Batteries stored at temperatures greater than 25° C (77° F) will require recharge sooner than batteries stored at lower temperatures. See C&D brochure 41-7272, Self-Discharge and Inventory Control for details.
<b>Equalize charge &amp; cycle service voltage</b>	14.40 to 14.80 VDC average per 12V unit @ 25° C (77° F)
<b>Terminal</b>	Threaded copper alloy insert terminal to accept: -M8 bolt (TEL12-105 FNSGC, TEL12-170FGC, TEL12-210 FGC) -M6 bolt (TEL12-115 FNGC)
<b>Terminal Hardware Initial Torque</b>	18 N-m (160 in.-lbs) for: TEL12-105 FNSGC, TEL12-170FGC, TEL12-210 FGC 12 N-m (107 in.-lbs) for: TEL12-115 FNGC

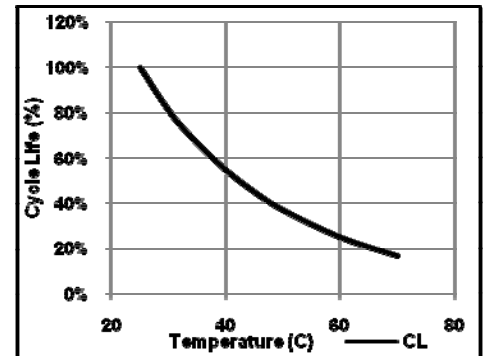
**Industry leading cycle life**



**Capacity vs. Temperature**



**Cycle life vs. Temperature**



**Constant Current Discharge Table - Amps at 25°C (77°F)**

**TEL 12-105FN5GC**

**Operating Time (hrs)**

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	55.2	32.2	23.4	18.7	15.7	13.6	12.1	10.7	9.7	8.8	7.5	6.6	5.9	5.3	4.8	4.1	2.8	2.1	1.4
1.80	53.7	31.6	23.0	18.4	15.4	13.4	11.9	10.6	9.5	8.7	7.4	6.5	5.7	5.2	4.7	4.0	2.8	2.1	1.4
1.85	50.2	30.7	22.3	17.7	14.8	12.9	11.5	10.2	9.2	8.4	7.1	6.2	5.5	5.0	4.5	3.9	2.7	2.0	1.4
1.90	44.6	27.9	20.3	16.2	13.6	11.8	10.5	9.5	8.5	7.8	6.7	5.8	5.2	4.7	4.2	3.6	2.5	1.8	1.3

**TEL 12-115FN5GC**

**Operating Time (hrs)**

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	57.8	33.7	24.5	19.6	16.4	14.2	12.7	11.3	10.1	9.2	7.9	6.9	6.1	5.6	5.0	4.3	3.0	2.2	1.5
1.80	56.2	33.1	24.0	19.3	16.2	14.1	12.5	11.1	10.0	9.1	7.7	6.8	6.0	5.4	4.9	4.2	2.9	2.2	1.5
1.85	52.5	32.1	23.3	18.6	15.5	13.5	12.0	10.7	9.6	8.8	7.5	6.5	5.8	5.2	4.8	4.1	2.8	2.1	1.4
1.90	46.7	29.2	21.3	17.0	14.3	12.4	11.0	9.9	8.9	8.2	7.0	6.1	5.4	4.9	4.4	3.8	2.6	1.9	1.3

**TEL 12-170FGC**

**Operating Time (hrs)**

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	89.2	52.1	37.8	30.3	25.4	22.0	19.6	17.4	15.7	14.3	12.2	10.7	9.5	8.6	7.7	6.6	4.6	3.4	2.3
1.80	86.8	51.1	37.1	29.7	25.0	21.7	19.3	17.1	15.4	14.0	12.0	10.4	9.3	8.4	7.6	6.5	4.5	3.4	2.3
1.85	81.1	49.6	36.0	28.6	24.0	20.9	18.5	16.5	14.8	13.5	11.5	10.1	8.9	8.1	7.3	6.3	4.4	3.2	2.2
1.90	72.0	45.1	32.9	26.3	22.1	19.1	17.0	15.3	13.8	12.6	10.8	9.4	8.4	7.6	6.8	5.8	4.0	3.0	2.0

**TEL 12-210FGC**

**Operating Time (hrs)**

EPV	1	2	3	4	5	6	7	8	9	10	12	14	16	18	20	24	36	48	72
1.75	109.1	63.7	46.2	37.1	31.0	26.9	24.0	21.3	19.1	17.4	14.9	13.0	11.6	10.5	9.5	8.0	5.6	4.1	2.8
1.80	106.2	62.5	45.4	36.4	30.6	26.5	23.6	20.9	18.9	17.2	14.6	12.8	11.4	10.2	9.3	8.0	5.6	4.1	2.8
1.85	99.2	60.7	44.0	35.0	29.4	25.5	22.7	20.1	18.2	16.5	14.1	12.3	10.9	9.9	9.0	7.7	5.4	3.9	2.7
1.90	88.1	55.2	40.2	32.1	27.0	23.4	20.7	18.7	16.9	15.4	13.2	11.5	10.2	9.2	8.4	7.1	4.9	3.7	2.5

\* Note: F= True Front Access , N= Narrow width format, S= Short Depth, G= Central Gas Collection System, C= cycling ability.

\* All data shall be changed without prior notice, C&D reserves the right to explain and update the information contained herein.



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