



# TRUE FRONT ACCESS

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



## 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

- Gas collection feature (standard), for Sealed Cabinet
- 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
- Standard 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

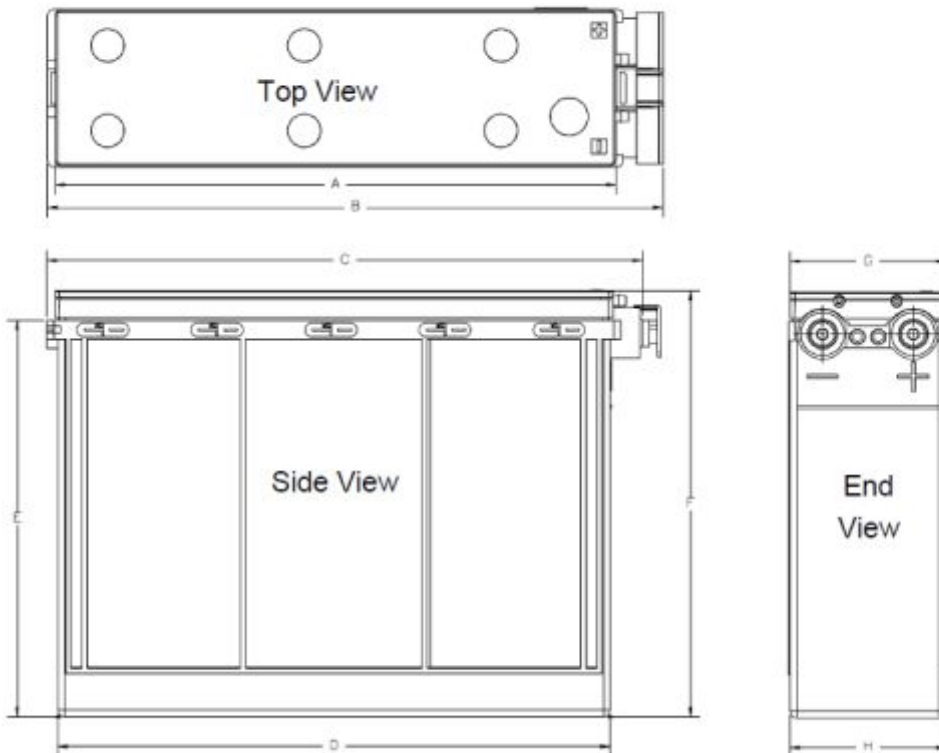
12 Volt Ampere Hour Capacity

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	59.5	68.2	73.9	77.8	81.4	84.3	86.6	87.8	88.9	89.9	91.3	92.6	93.6	94.6	95.9	97.7	101.8	100.7	102.6
TEL 12-115 FNGC	61.1	69.8	75.8	80.2	83.9	87.0	89.4	90.7	91.8	92.8	94.6	96.2	97.5	98.8	99.9	101.8	106.2	105.0	106.9
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	115.6	134.4	144.6	152.2	158.6	162.8	166.3	169.4	172.2	174.5	178.9	182.7	186.1	189.2	191.8	197.0	209.2	203.2	206.9

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 12-105 FNSGC	12V	88	87	1907	6.7	1218	33.0
TEL 12-115 FNGC	12V	91	90	1941	6.5	1224	34.4
TEL 12-170 FGC	12V	139	138	2554	4.9	1400	50.9
TEL 12-210 FGC	12V	169	169	2729	4.6	1543	60.6

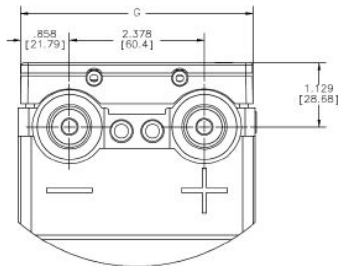
## Dimensions



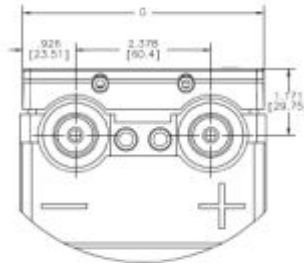
Front access to connections:  
 -Eases installation,  
 -Improves safety for maintenance,  
 -Increases overall power density.

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

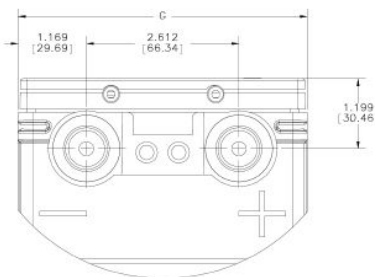
## Detail of Terminal



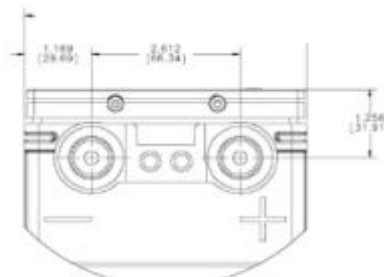
**TEL 12-105 FNSGC**



**TEL 12-115 FNGC**



**TEL 12-170 FGC**



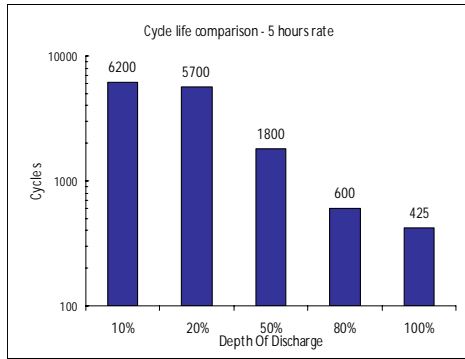
**TEL 12-210 FGC**

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

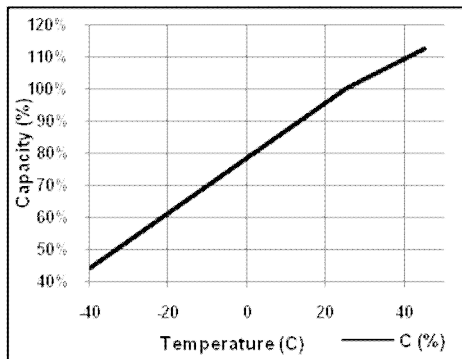
## Specifications

<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, TEL12-170 FGC, TEL12-210 FGC ) -M6 bolt (TEL12-115 FNGC)
<b>Terminal Hardware Initial Torque</b>	18 N-m (160 in.-lbs) for: TEL12-105 FNSGC, TEL12-170 FGC, TEL12-210 FGC 12 N-m (107 in.-lbs) for: TEL12-115 FNGC

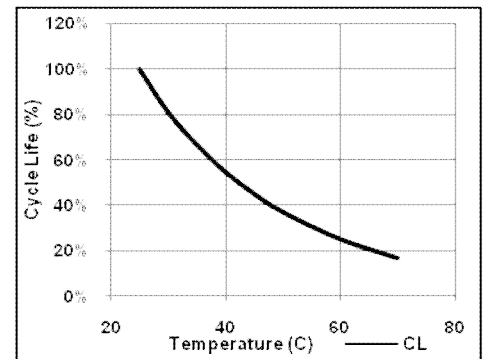
Industry leading cycle life



Capacity vs. Temperature



Cycle life vs. Temperature



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

**TEL 12-105 FNSGC**

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	59.5	34.1	24.6	19.4	16.3	14.1	12.4	11.0	9.9	9.0	7.6	6.6	5.9	5.3	4.8	4.1	2.8	2.1	1.4
1.80	58.8	33.8	24.3	19.3	16.1	13.9	12.3	10.9	9.8	8.9	7.5	6.5	5.8	5.2	4.7	4.0	2.7	2.1	1.4
1.85	55.2	32.2	23.3	18.5	15.5	13.4	11.8	10.5	9.4	8.5	7.2	6.3	5.5	5.0	4.5	3.8	2.6	2.0	1.3
1.90	49.7	29.6	21.4	17.0	14.2	12.3	10.8	9.6	8.6	7.8	6.6	5.7	5.1	4.6	4.1	3.5	2.4	1.8	1.2

**TEL 12-115 FNGC**

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	61.1	34.9	25.3	20.1	16.8	14.5	12.8	11.3	10.2	9.3	7.9	6.9	6.1	5.5	5.0	4.2	3.0	2.2	1.5
1.80	59.8	34.3	24.8	19.8	16.6	14.3	12.6	11.2	10.0	9.1	7.8	6.8	6.0	5.4	4.9	4.2	2.9	2.2	1.5
1.85	56.2	32.7	23.8	19.0	15.9	13.8	12.1	10.7	9.6	8.8	7.5	6.5	5.8	5.2	4.7	4.0	2.8	2.1	1.4
1.90	49.7	29.9	21.7	17.3	14.5	12.6	11.0	9.7	8.8	8.0	6.8	5.9	5.3	4.8	4.3	3.7	2.6	1.9	1.3

**TEL 12-170 FGC**

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 12-210 FGC**

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	115.6	67.2	48.2	38.1	31.7	27.1	23.8	21.2	19.1	17.5	14.9	13.1	11.6	10.5	9.6	8.2	5.8	4.2	2.9
1.80	111.0	65.7	47.4	37.5	31.3	26.7	23.5	20.9	18.9	17.2	14.7	12.9	11.5	10.3	9.5	8.1	5.7	4.2	2.8
1.85	101.0	61.7	44.8	35.7	30.0	25.7	22.5	20.0	18.1	16.5	14.1	12.4	11.0	9.9	9.1	7.8	5.5	4.0	2.7
1.90	89.5	55.9	40.9	32.8	27.6	23.7	20.8	18.5	16.7	15.3	13.1	11.4	10.2	9.2	8.4	7.2	5.1	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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