



# NSB 170FT BLUE+

## AGM Thin Plate Lead Carbon



The NSB BLUE+ Battery® delivers ultra fast recharge and exceptional PSoC cycling performance.

- Exceptional PSoC cyclic performance 2050 cycles @50% DoD
- Design life 12+ years at 20°C
- (68°F) Ultra fast recharge
- Shelf life of up to 24 months
- Lead carbon added to negative electrodes increases power and reduces sulfation
- High potential fuel savings when used with hybrid genset applications
- Operating temperature range -40°C to +65°C (-40°F to 149°F)
- State-of-the-art automated manufacturing ensures consistency and reliability
- Advanced 3 stage terminal design to ensure leak-free operation - brass terminals provide maximum performance
- High modulus Polyphenylene Oxide (PPO) plastic materials designed to withstand extended elevated operating temperatures and maintain high battery compression essential for reliable operation
- Non-halogenated thermally sealed plastic casing Approved as non-hazardous cargo for ground sea and air transport DOT 49CFR173.159(d), (i) and (ii)

# NSB 170FT BLUE+

## Nominal Technical Specifications

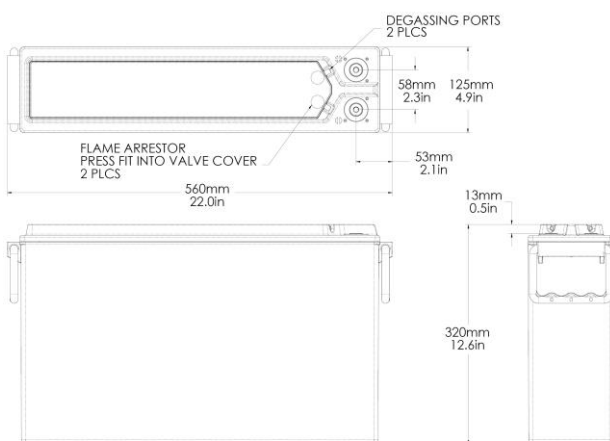
### Dimensions

Height	320 mm	Width	125 mm
Length	560 mm	Weight	60 kg

### Electrical

Terminal	Female M8 x 1.25
Terminal torque	8.0 Nm (71 in-lbs)
10 hr capacity to 1.80VPC @ 25°C (77°F)	170 Ah
8 hr capacity to 1.75VPC @ 25°C (77°F)	168 Ah
Float voltage @ 20/25°C (68/77°F)	2.28 / 2.27 VPC
Impedance (1Khz)	2.1 mΩ @ 25°C (77°F)
Conductance	2380 S
Short circuit current	6000 A
Maximum charge current (A)	No Limit
Operation temperature range	-40°C to +65°C
Nominal voltage	12 V

### Technical Drawing



All NorthStar batteries are compliant with: Telcordia SR4228, IEC 60896; Bellcore GR-63-Core, Issue 1; British, German, and Russian telecom standards; UL approved and UN2800 certified. NorthStar is registered to ISO 9001 and ISO 14001.

# NSB 170FT BLUE+ Battery<sup>®</sup>

Discharge tables @ 20°C (68°F)



**Current / A**

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	634.8	673.2	714.8	760.0	789.0	809.2	862.7	921.0	984.6
5	0.08	432.9	468.0	502.0	534.2	552.4	564.0	590.8	613.9	632.9
10	0.17	306.0	331.8	355.7	377.1	388.3	395.1	409.4	419.3	424.6
15	0.25	244.5	264.6	282.8	298.6	306.7	311.5	321.0	326.7	328.5
20	0.33	206.5	222.9	237.5	250.0	256.3	259.9	266.9	270.7	271.1
30	0.50	160.7	172.5	182.9	191.6	195.8	198.2	202.6	204.7	204.2
45	0.75	123.3	131.4	138.4	144.2	147.0	148.6	151.3	152.3	151.7
60	1	101.2	107.3	112.5	116.8	118.8	119.9	121.8	122.5	121.8
120	2	61.2	64.0	66.3	68.1	69.0	69.5	70.3	70.5	70.2
180	3	44.8	46.4	47.8	48.9	49.4	49.6	50.1	50.3	50.1
240	4	35.6	36.7	37.6	38.3	38.7	38.9	39.2	39.3	39.2
300	5	29.7	30.5	31.1	31.6	31.9	32.0	32.3	32.4	32.3
480	8	20.0	20.4	20.7	20.9	21.1	21.1	21.3	21.4	21.4
600	10	16.5	16.8	17.0	17.2	17.2	17.3	17.4	17.5	17.5
1200	20	8.9	9.0	9.0	9.1	9.2	9.2	9.2	9.3	9.3

**Capacity / Ah**

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	21.2	22.4	23.8	25.3	26.3	27.0	28.8	30.7	32.8
5	0.08	36.1	39.0	41.8	44.5	46.0	47.0	49.2	51.2	52.7
10	0.17	51.0	55.3	59.3	62.8	64.7	65.9	68.2	69.9	70.8
15	0.25	61.1	66.1	70.7	74.7	76.7	77.9	80.2	81.7	82.1
20	0.33	68.8	74.3	79.2	83.3	85.4	86.6	89.0	90.2	90.4
30	0.50	80.4	86.2	91.4	95.8	97.9	99.1	101.3	102.3	102.3
45	0.75	92.4	98.5	103.8	108.2	110.3	111.4	113.5	114.3	114.3
60	1	101.2	107.3	112.5	116.8	118.8	119.9	121.8	122.5	122.5
120	2	122.4	127.9	132.6	136.3	138.0	139.0	140.5	141.0	141.0
180	3	134.4	139.3	143.4	146.6	148.1	148.9	150.4	150.8	150.8
240	4	142.6	146.9	150.5	153.3	154.7	155.4	156.7	157.2	157.2
300	5	148.6	152.4	155.6	158.2	159.5	160.2	161.4	161.9	161.9
480	8	160.2	163.1	165.5	167.6	168.6	169.2	170.3	170.9	171.1
600	10	165.1	167.6	169.8	171.6	172.5	173.0	174.1	174.8	175.1
1200	20	177.6	179.3	180.9	182.4	183.2	183.7	184.8	185.7	186.5

**Power / WPC**

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	1133.7	1196.6	1261.6	1328.5	1369.6	1397.3	1468.0	1540.4	1614.5
5	0.08	808.5	864.8	917.9	967.0	994.0	1010.9	1048.7	1079.7	1103.1
10	0.17	583.3	624.6	662.3	695.3	712.5	722.7	743.8	758.0	764.7
15	0.25	469.4	501.6	530.5	555.2	567.7	575.0	589.4	597.9	600.2
20	0.33	398.0	424.2	447.5	467.1	476.9	482.5	493.3	499.0	499.6
30	0.50	310.6	329.5	346.1	359.8	366.5	370.3	377.3	380.5	380.5
45	0.75	238.4	251.5	262.8	272.0	276.5	278.9	283.4	285.1	285.1
60	1	195.7	205.5	213.9	220.7	224.0	225.8	228.9	230.1	230.1
120	2	118.0	122.5	126.3	129.3	130.7	131.5	132.8	133.2	133.2
180	3	86.2	88.8	91.0	92.8	93.6	94.1	94.9	95.2	95.2
240	4	68.4	70.2	71.7	72.8	73.4	73.7	74.3	74.5	74.5
300	5	56.9	58.2	59.3	60.2	60.6	60.8	61.2	61.4	61.4
480	8	38.2	38.9	39.4	39.8	40.0	40.2	40.4	40.5	40.5
600	10	31.5	31.9	32.3	32.6	32.8	32.9	33.1	33.2	33.2
1200	20	16.9	17.1	17.2	17.4	17.4	17.5	17.6	17.6	17.7

# NSB 170FT BLUE+ Battery®

Discharge tables @ 25°C (77°F)



**Current / A**

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	704.5	747.0	793.2	843.4	875.6	898.0	957.4	1022.1	1092.6
5	0.08	471.3	509.6	546.6	581.7	601.5	614.1	643.2	668.4	689.1
10	0.17	328.8	356.5	382.2	405.1	417.2	424.5	439.8	450.5	456.3
15	0.25	260.8	282.2	301.6	318.5	327.2	332.2	342.3	348.4	350.3
20	0.33	219.2	236.5	252.1	265.4	272.0	275.9	283.3	287.3	287.7
30	0.50	169.4	181.8	192.8	201.9	206.4	209.0	213.6	215.8	215.3
45	0.75	129.1	137.6	145.0	151.1	154.0	155.6	158.5	159.6	158.9
60	1	105.6	111.9	117.4	121.8	123.9	125.1	127.1	127.8	127.1
120	2	63.2	66.1	68.5	70.4	71.3	71.8	72.6	72.8	72.5
180	3	46.1	47.7	49.1	50.2	50.7	51.0	51.5	51.7	51.5
240	4	36.5	37.6	38.5	39.3	39.6	39.8	40.1	40.2	40.2
300	5	30.4	31.1	31.8	32.3	32.6	32.7	33.0	33.1	33.0
480	8	20.3	20.7	21.0	21.3	21.4	21.5	21.6	21.7	21.7
600	10	16.7	17.0	17.2	17.4	17.5	17.5	17.7	17.7	17.8
1200	20	8.9	9.0	9.1	9.2	9.2	9.3	9.3	9.4	9.4

**Capacity / Ah**

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	23.5	24.9	26.4	28.1	29.2	29.9	31.9	34.1	36.4
5	0.08	39.3	42.5	45.5	48.5	50.1	51.2	53.6	55.7	57.4
10	0.17	54.8	59.4	63.7	67.5	69.5	70.8	73.3	75.1	76.0
15	0.25	65.2	70.5	75.4	79.6	81.8	83.1	85.6	87.1	87.6
20	0.33	73.1	78.8	84.0	88.5	90.7	92.0	94.4	95.8	95.9
30	0.50	84.7	90.9	96.4	101.0	103.2	104.5	106.8	107.9	107.9
45	0.75	96.8	103.2	108.8	113.3	115.5	116.7	118.9	119.7	119.7
60	1	105.6	111.9	117.4	121.8	123.9	125.1	127.1	127.8	127.8
120	2	126.5	132.1	136.9	140.8	142.6	143.5	145.2	145.7	145.7
180	3	138.2	143.1	147.3	150.6	152.2	153.1	154.5	155.0	155.0
240	4	146.0	150.4	154.1	157.0	158.4	159.2	160.5	161.0	161.0
300	5	151.8	155.7	159.0	161.6	162.9	163.6	164.8	165.4	165.4
480	8	162.8	165.7	168.2	170.3	171.3	171.9	173.0	173.7	173.8
600	10	167.4	169.9	172.1	173.9	174.9	175.4	176.5	177.2	177.6
1200	20	178.9	180.7	182.3	183.7	184.5	185.0	186.2	187.1	187.9

**Power / WPC**

Duration		End of Discharge Voltage								
Minutes	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	1258.0	1327.9	1400.0	1474.3	1519.8	1550.6	1629.1	1709.4	1791.7
5	0.08	880.2	941.5	999.4	1052.8	1082.2	1100.6	1141.8	1175.5	1201.1
10	0.17	626.7	671.1	711.6	747.0	765.5	776.5	799.2	814.4	821.7
15	0.25	500.7	535.1	565.9	592.2	605.6	613.4	628.7	637.7	640.2
20	0.33	422.4	450.2	474.9	495.7	506.1	512.1	523.5	529.6	530.2
30	0.50	327.5	347.4	364.9	379.3	386.4	390.4	397.8	401.2	401.2
45	0.75	249.8	263.5	275.3	285.0	289.6	292.2	296.8	298.7	298.7
60	1	204.2	214.4	223.2	230.3	233.6	235.5	238.8	240.0	240.0
120	2	121.9	126.5	130.4	133.5	135.0	135.8	137.2	137.6	137.6
180	3	88.5	91.3	93.5	95.4	96.2	96.7	97.5	97.8	97.8
240	4	70.0	71.8	73.4	74.6	75.2	75.5	76.1	76.3	76.3
300	5	58.1	59.5	60.6	61.4	61.9	62.1	62.5	62.7	62.7
480	8	38.9	39.5	40.0	40.5	40.7	40.8	41.1	41.2	41.2
600	10	31.9	32.4	32.8	33.1	33.2	33.3	33.5	33.6	33.7
1200	20	17.1	17.2	17.4	17.5	17.6	17.6	17.7	17.8	17.8