

NSB 170FT Red Battery®

Long float life at elevated temperatures



Red Star Technology® uses pure lead plates to deliver **exceptionally long float life even at elevated temperatures.**

- Pure lead AGM technology delivers long float life for telecom applications even at elevated temperatures
- 15 year float life at 20°C (68°F)
- EUROBAT design life definition: Long Life (12+ years)
- High energy density
- 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 - female M8 brass terminals provide maximum performance
- 2 year shelf life at 25°C (77°F)
- 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
 - Flame retardant (UL 94 VO) and LOI of at least 28%
- Integral handles and front access terminals ensure ease of installation and maintenance
- Approved as non-hazardous cargo for ground, sea, and air transport - DOT 49CFR173.159(d), (i) and (ii)

NSB 170FT Red Battery®

Nominal Technical Specifications



Electrical

	International Standard 20°C (68°F)	North American Standard 25°C (77°F)
8 hour capacity to 1.75 VPC	171 Ah	174 Ah
10 hour capacity to 1.80 VPC	172 Ah	174 Ah
Float Voltage	2.27 +/- 0.02 VPC	2.27 +/- 0.02 VPC
Nominal Voltage	12 V	
Impedance [1kHz]	3.3 mΩ @ 25°C (77°F)	
Conductance	1,554 S	
Short Circuit Current	6,000 A	

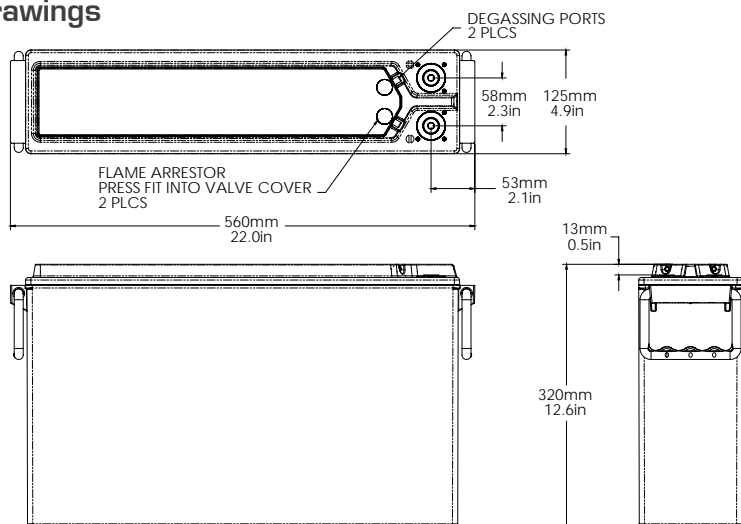
Dimensions

Height	320 mm (12.6 in)	Weight	55 kg (121 lbs)
Width	125 mm (4.9 in)	Terminal	Female M8 x 1.25
Depth	560 mm (22.0 in)	Terminal Torque	8.0 Nm (71 in-lbs)

Ah Capacity Ratings @ 25°C (77°F)

Capacity Discharge / hours	1	2	5	8	10
Capacity @ 25°C / Ah	131	150	169	174	174
End of Discharge / VPC	1.70	1.75	1.75	1.75	1.80

Drawings



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

Northstar 170FT Red Battery™



Discharge Tables - 20°C (68°F)

Current / A

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	360.5	455.9	556.9	657.1	713.7	748.9	824.5	876.9	900.8
5	0.08	336.5	393.8	450.7	504.4	533.9	552.0	590.7	618.2	632.7
10	0.17	282.3	315.2	346.7	375.6	391.2	400.7	420.9	435.5	443.7
15	0.25	243.2	265.5	286.3	305.2	315.2	321.4	334.4	343.8	349.2
20	0.33	214.5	230.9	246.0	259.5	266.6	271.0	280.2	286.9	290.8
30	0.50	175.1	185.1	194.3	202.3	206.6	209.1	214.5	218.4	220.7
45	0.75	138.7	144.5	149.7	154.3	156.6	158.0	161.0	163.1	164.3
60	1	115.5	119.3	122.7	125.6	127.1	128.0	129.8	131.1	131.8
120	2	70.4	71.6	72.6	73.5	73.9	74.1	74.6	74.9	75.0
180	3	50.9	51.5	51.9	52.3	52.5	52.6	52.8	52.8	52.8
240	4	39.9	40.2	40.5	40.7	40.8	40.8	40.9	40.9	40.9
300	5	32.7	33.0	33.2	33.3	33.4	33.4	33.4	33.4	33.4
480	8	21.1	21.3	21.4	21.5	21.5	21.6	21.6	21.6	21.5
600	10	17.0	17.2	17.3	17.3	17.4	17.4	17.4	17.4	17.4
1200	20	8.4	8.5	8.6	8.7	8.7	8.7	8.8	8.8	8.8

Capacity / Ah

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	12.0	15.2	18.6	21.9	23.8	25.0	27.5	29.2	30.0
5	0.08	28.0	32.8	37.6	42.0	44.5	46.0	49.2	51.5	52.7
10	0.17	47.0	52.5	57.8	62.6	65.2	66.8	70.2	72.6	73.9
15	0.25	60.8	66.4	71.6	76.3	78.8	80.3	83.6	85.9	87.3
20	0.33	71.5	77.0	82.0	86.5	88.9	90.3	93.4	95.6	96.9
30	0.50	87.5	92.6	97.1	101.2	103.3	104.6	107.3	109.2	110.4
45	0.75	104.0	108.4	112.3	115.7	117.5	118.5	120.8	122.3	123.2
60	1	115.5	119.3	122.7	125.6	127.1	128.0	129.8	131.1	131.8
120	2	140.7	143.1	145.2	146.9	147.8	148.2	149.2	149.8	149.9
180	3	152.7	154.4	155.8	157.0	157.5	157.8	158.3	158.5	158.5
240	4	159.4	160.8	162.0	162.8	163.2	163.4	163.7	163.7	163.7
300	5	163.6	164.8	165.8	166.5	166.8	167.0	167.2	167.1	167.1
480	8	169.2	170.4	171.3	172.0	172.3	172.4	172.6	172.5	172.5
600	10	170.3	171.6	172.6	173.4	173.8	174.0	174.2	174.2	174.2
1200	20	167.5	169.9	171.9	173.5	174.4	174.8	175.8	176.4	176.7

Power / W per cell

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	663	802	943	1079	1154	1201	1300	1368	1401
5	0.08	638.2	725.8	810.3	887.9	930	955	1008	1045	1063
10	0.17	541.4	592.7	640.5	683.4	706.1	719.8	748.4	768.2	778.4
15	0.25	468.2	502.9	534.7	562.9	577.8	586.7	605.4	618.4	625.4
20	0.33	413.8	439.1	462.2	482.5	493.1	499.5	512.9	522.4	527.6
30	0.50	338.5	353.9	367.7	379.8	386.2	390.0	398.0	403.8	407.3
45	0.75	268.9	277.5	285.3	292.1	295.6	297.8	302.4	305.8	308.0
60	1	224.6	230.1	235.0	239.3	241.5	242.9	245.9	248.2	249.7
120	2	138.4	139.8	141.1	142.3	142.9	143.3	144.3	145.1	145.8
180	3	101.2	101.7	102.2	102.7	102.9	103.1	103.6	104.0	104.4
240	4	80.1	80.3	80.5	80.8	80.9	81.0	81.3	81.6	81.8
300	5	66.4	66.5	66.6	66.8	66.9	66.9	67.1	67.3	67.5
480	8	44.0	44.1	44.2	44.2	44.3	44.3	44.4	44.6	44.7
600	10	36.0	36.1	36.2	36.2	36.3	36.3	36.4	36.5	36.6
1200	20	18.8	19.0	19.1	19.3	19.3	19.4	19.5	19.5	19.6

Northstar 170FT Red Battery™



Discharge Tables - 25°C (77°F)

Current / A

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	400.1	505.9	618.0	729.2	792.0	831.1	915.0	973.1	999.6
5	0.08	366.4	428.8	490.7	549.2	581.2	601.0	643.2	673.1	688.9
10	0.17	303.3	338.7	372.6	403.6	420.3	430.5	452.2	467.9	476.7
15	0.25	259.4	283.2	305.4	325.5	336.2	342.8	356.7	366.7	372.5
20	0.33	227.7	245.0	261.1	275.4	283.0	287.6	297.4	304.5	308.6
30	0.50	184.6	195.2	204.8	213.3	217.8	220.5	226.2	230.3	232.7
45	0.75	145.3	151.4	156.8	161.6	164.1	165.6	168.7	170.9	172.1
60	1	120.5	124.5	128.0	131.0	132.6	133.5	135.4	136.8	137.5
120	2	72.7	73.9	75.0	75.9	76.3	76.6	77.1	77.3	77.4
180	3	52.3	52.9	53.4	53.8	54.0	54.1	54.2	54.3	54.3
240	4	40.8	41.2	41.5	41.7	41.8	41.8	41.9	41.9	41.8
300	5	33.4	33.7	33.9	34.0	34.1	34.1	34.2	34.1	34.1
480	8	21.5	21.6	21.8	21.8	21.9	21.9	21.9	21.9	21.9
600	10	17.3	17.4	17.5	17.6	17.6	17.6	17.7	17.7	17.6
1200	20	8.4	8.6	8.7	8.7	8.8	8.8	8.9	8.9	8.9

Capacity / Ah

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	13.3	16.9	20.6	24.3	26.4	27.7	30.5	32.4	33.3
5	0.08	30.5	35.7	40.9	45.8	48.4	50.1	53.6	56.1	57.4
10	0.17	50.5	56.5	62.1	67.3	70.0	71.7	75.4	78.0	79.5
15	0.25	64.8	70.8	76.4	81.4	84.1	85.7	89.2	91.7	93.1
20	0.33	75.9	81.7	87.0	91.8	94.3	95.9	99.1	101.5	102.9
30	0.50	92.3	97.6	102.4	106.6	108.9	110.2	113.1	115.1	116.3
45	0.75	108.9	113.5	117.6	121.2	123.0	124.2	126.5	128.2	129.1
60	1	120.5	124.5	128.0	131.0	132.6	133.5	135.4	136.8	137.5
120	2	145.4	147.9	150.0	151.8	152.6	153.1	154.1	154.7	154.9
180	3	156.9	158.7	160.1	161.3	161.9	162.2	162.7	162.9	162.9
240	4	163.3	164.7	165.8	166.7	167.1	167.3	167.6	167.7	167.7
300	5	167.1	168.4	169.4	170.1	170.4	170.6	170.8	170.7	170.7
480	8	171.9	173.1	174.1	174.8	175.1	175.2	175.4	175.2	175.2
600	10	172.6	174.0	175.0	175.8	176.2	176.4	176.6	176.6	176.6
1200	20	168.8	171.1	173.1	174.8	175.7	176.1	177.1	177.7	178.0

Power / W per cell

Duration		End of Discharge Voltage								
Mins	Hours	1.85	1.80	1.75	1.70	1.67	1.65	1.60	1.55	1.50
2	0.03	736	890	1046	1197	1281	1333	1442	1518	1555
5	0.08	694.8	790.2	882.2	966.7	1012	1040	1098	1138	1158
10	0.17	581.7	636.8	688.2	734.2	758.6	773.3	804.1	825.4	836.4
15	0.25	499.4	536.4	570.4	600.4	616.3	625.8	645.7	659.6	667.1
20	0.33	439.2	466.1	490.5	512.1	523.4	530.1	544.4	554.4	560.0
30	0.50	356.9	373.1	387.7	400.4	407.1	411.1	419.6	425.7	429.3
45	0.75	281.7	290.7	298.9	306.0	309.7	311.9	316.8	320.3	322.6
60	1	234.3	240.0	245.1	249.6	251.9	253.4	256.5	258.8	260.5
120	2	142.9	144.4	145.7	147.0	147.6	148.1	149.0	149.9	150.6
180	3	104.0	104.5	105.0	105.5	105.8	106.0	106.4	106.9	107.3
240	4	82.0	82.2	82.5	82.7	82.9	83.0	83.2	83.5	83.8
300	5	67.8	67.9	68.0	68.2	68.3	68.4	68.5	68.7	69.0
480	8	44.7	44.8	44.9	45.0	45.0	45.1	45.2	45.3	45.4
600	10	36.5	36.6	36.7	36.7	36.8	36.8	36.9	37.0	37.1
1200	20	19.0	19.1	19.3	19.4	19.5	19.5	19.6	19.7	19.7