



STRYTEN ENERGY

E-SERIES

Flooded NCN >>>

Flooded NCN batteries are the Nuclear variant of Stryten Energy's commercial NCX line. They are an industry-proven standby power source and are qualified according to IEEE 535 and capacity tested to IEEE 450 for Nuclear Power Generating Stations. Product features include heavy-duty jars and covers, superior terminal post design, dual seals (O-ring & seal nut) to prevent acid creep, electrolyte level lines on all faces, flash arrester fill funnels for all cells, sample tubes for accurate specific gravity readings and components are fully recyclable.



THE ENERGY TO CHALLENGE >>>

FLOODED NCN – LEAD CALCIUM TECHNOLOGY

SPECIAL PURPOSE: NUCLEAR CLASS 1E

Type – NCN* - Lead Calcium

Capacities – 688 A.H. to 2552 A.H.

8 hour rate to 1.75 V.P.C. @ 77°F (25°C)

20 year life expectancy

SPECIFICATIONS

Jar – Styrene-Acrylonitrile (SAN) Plastic

Cover – Acrylonitrile Butadiene Styrene (ABS) Plastic

Separators – Microporous Rubber Material

Retainers – Fiberglass Mat

Posts – NCN 7-17 two- 1.5" (38.1 mm) square
 NCN 19-27 four-1.0" (25.4 mm) square
 NCN 29-35 four - 1.5" (38.1 mm) square

Post Seals – Floating "O" Ring - Seal Nut

Vents – Stryten Energy "Pre-Vent" Flame Arrester

Level Lines – High and Low - All Jar Faces

Electrolyte – Height above plates - 2.66" (67.6 mm)

Electrolyte Withdrawal Tubes – 2 Per Cell

Sediment Space – 1.18" (30.0 mm)

Specific Gravity – 1.215 @ 77°F (25°C)

Inter-Cell Connectors – Lead Plated Copper

Qualified according to IEEE 535

Tested according to IEEE 450

*NCN are the nuclear variant of Stryten Energy's commercial NCX line.



PLATE DIMENSIONS	HEIGHT	WIDTH	THICKNESS
Positive Plate	15 in 381 mm	12.5 in 317.5 mm	.325 in 8.26 mm
Negative Plate	15 in 381 mm	12.5 in 317.5 mm	.220 in 5.59 mm

CELL TYPE	AMP-HOUR CAPACITY	OVERALL DIMENSIONS			APPROXIMATE WEIGHT		ELECTROLYTE PER CELL
		LENGTH	WIDTH	HEIGHT	NET	PACKED	
NCN-9	688	7.38 in/187 mm	14.55 in/368 mm	22.13 in/562 mm	177 lbs/80 kg	189 lbs/86 kg	6.0 gal/22.7 liter
NCN-11	824	7.38 in/187 mm	14.55 in/368 mm	22.13 in/562 mm	195 lbs/89 kg	207 lbs/94 kg	5.6 gal/21.2 liter
NCN-13	952	7.38 in/187 mm	14.55 in/368 mm	22.13 in/562 mm	213 lbs/97 kg	225 lbs/102 kg	5.1 gal/19.3 liter
NCN-15	1072	7.38 in/187 mm	14.55 in/368 mm	22.13 in/562 mm	231 lbs/105 kg	243 lbs/110 kg	5.0 gal/18.9 liter
NCN-17	1200	7.38 in/187 mm	14.55 in/368 mm	22.13 in/562 mm	249 lbs/112 kg	261 lbs/117 kg	4.9 gal/18.5 liter
NCN-19	1368	9.25 in/235 mm	14.55 in/368 mm	22.5 in/572 mm	282 lbs/128 kg	294 lbs/134 kg	6.3 gal/23.8 liter
NCN-21	1496	9.25 in/235 mm	14.55 in/368 mm	22.5 in/572 mm	301 lbs/137 kg	313 lbs/142 kg	6.0 gal/22.7 liter
NCN-23	1672	11.38 in/289 mm	14.55 in/368 mm	22.5 in/572 mm	348 lbs/158 kg	366 lbs/166 kg	8.0 gal/30.3 liter
NCN-25	1808	11.38 in/289 mm	14.55 in/368 mm	22.5 in/572 mm	364 lbs/165 kg	382 lbs/174 kg	7.6 gal/28.8 liter
NCN-27	1944	11.38 in/289 mm	14.55 in/368 mm	22.5 in/572 mm	380 lbs/173 kg	398 lbs/181 kg	7.3 gal/27.6 liter
NCN-29	2152	14.56 in/370 mm	14.55 in/368 mm	22.5 in/572 mm	446 lbs/203 kg	464 lbs/211 kg	11.5 gal/43.5 liter
NCN-31	2280	14.56 in/370 mm	14.55 in/368 mm	22.5 in/572 mm	462 lbs/210 kg	480 lbs/218 kg	10.9 gal/41.3 liter
NCN-33	2416	14.56 in/370 mm	14.55 in/368 mm	22.5 in/572 mm	479 lbs/218 kg	497 lbs/226 kg	10.3 gal/39.0 liter
NCN-35	2552	14.56 in/370 mm	14.55 in/368 mm	22.5 in/572 mm	496 lbs/225 kg	514 lbs/234 kg	9.7 gal 36.7 liter

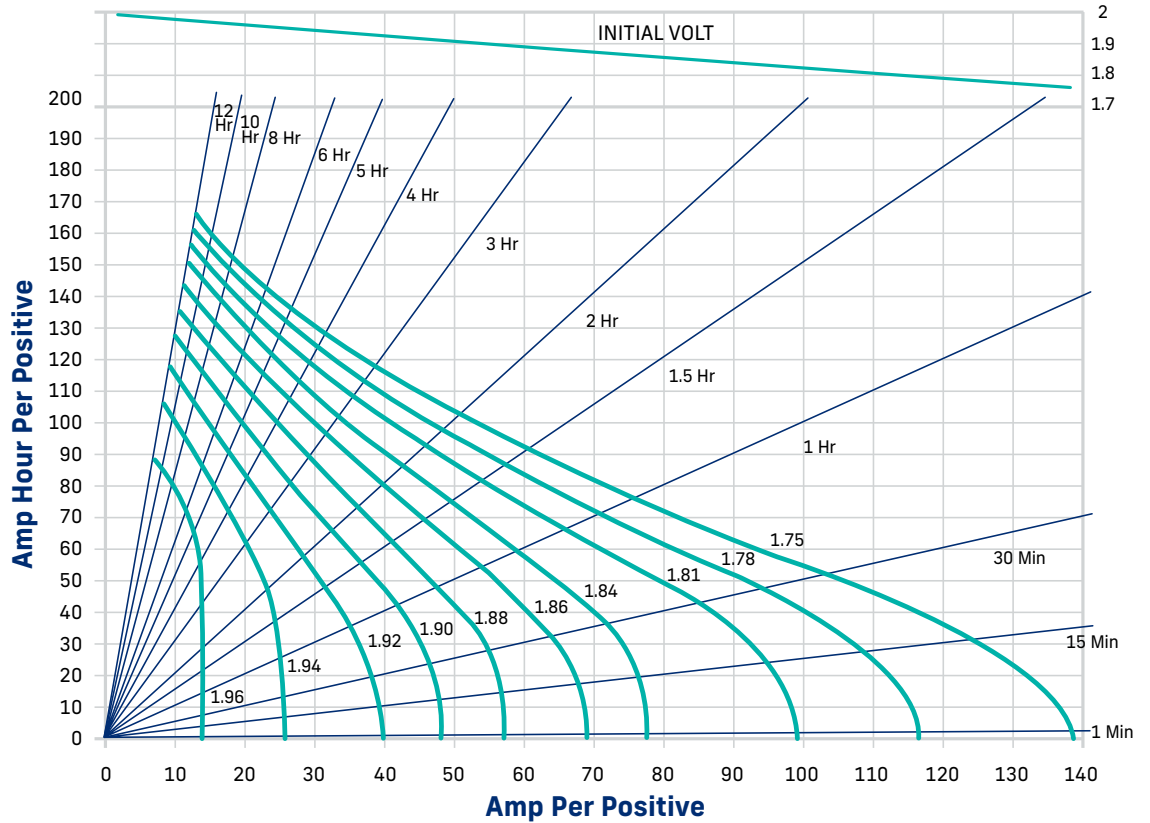
*8 hour rate to 1.75 VPC @ 77°F (25°C)

NCN NUCLEAR CLASS 1E

STATIONARY BATTERY RATES

Note: This information represents the average performance of the line. Refer to the tables for actual discharge data.

Qualified in accordance with IEEE Std 535
Tested in accordance with IEEE Std 450.



AMP DATA @ 77°F (25°C) NCN CELLS

(Including voltage drops from connectors)

CELL TYPE	HOURS							MINUTES		
	8	5	4	3	2	1.5	1	30	15	1
AMPERES TO 1.75 VPC										
NCN-9	86	124	138	165	204	240	300	454	515	582
NCN-11	103	149	167	200	252	300	375	561	686	727
NCN-13	119	171	198	238	292	345	450	666	814	873
NCN-15	134	194	227	277	350	412	525	768	939	1018
NCN-17	150	216	254	312	405	465	600	867	1060	1165
NCN-19	171	246	290	357	460	535	675	953	1165	1260
NCN-21	187	270	317	390	515	590	750	1033	1263	1400
NCN-23	209	301	354	436	560	660	825	1136	1389	1540
NCN-25	226	326	384	472	615	725	900	1232	1506	1680
NCN-27	243	351	412	507	670	785	975	1327	1622	1840
NCN-29	269	389	455	555	715	857	1050	1429	1747	1932
NCN-31	285	411	483	595	770	925	1125	1531	1872	2070
NCN-33	302	435	512	629	820	995	1200	1633	1966	2220
NCN-35	319	459	539	663	868	1053	1275	1735	2121	2350
AMPERES TO 1.78 VPC										
NCN-9	83	120	132	156	196	228	279	376	432	510
NCN-11	100	144	162	193	242	285	349	470	540	637
NCN-13	115	166	190	228	280	328	419	564	648	765
NCN-15	130	187	220	261	336	391	488	658	756	892
NCN-17	146	209	244	293	389	442	558	752	864	1020
NCN-19	165	239	279	333	442	508	628	846	972	1107
NCN-21	182	262	305	366	494	561	698	940	1080	1230
NCN-23	202	292	341	407	538	627	767	1034	1188	1287
NCN-25	219	316	369	440	590	689	837	1128	1296	1404
NCN-27	237	340	396	476	643	746	907	1222	1404	1521
NCN-29	260	375	441	522	694	814	977	1316	1512	1624
NCN-31	275	399	465	555	747	879	1046	1410	1620	1740
NCN-33	292	422	492	586	795	945	1116	1504	1728	1850
NCN-35	310	445	518	623	842	1000	1186	1598	1836	1970

AMP DATA @ 77°F (25°C) NCN CELLS

(Including voltage drops from connectors)

CELL TYPE	HOURS							MINUTES		
	8	5	4	3	2	1.5	1	30	15	1
AMPERES TO 1.81 VPC										
NCN-9	81	117	127	152	184	211	255	340	380	440
NCN-11	97	140	156	185	227	264	319	425	475	550
NCN-13	112	162	183	218	263	304	383	510	570	660
NCN-15	127	182	211	252	315	363	446	595	665	770
NCN-17	141	203	236	285	365	409	510	680	760	880
NCN-19	161	232	267	324	414	471	574	765	855	954
NCN-21	176	254	295	357	464	519	638	850	950	1060
NCN-23	197	284	327	396	505	581	701	935	1045	1100
NCN-25	213	307	357	428	554	638	765	1020	1140	1200
NCN-27	229	330	383	464	603	691	829	1105	1235	1306
NCN-29	254	364	423	509	643	754	893	1190	1330	1386
NCN-31	268	387	446	540	693	814	956	1275	1425	1485
NCN-33	284	410	476	571	738	875	1020	1360	1520	1600
NCN-35	300	432	505	606	781	926	1084	1445	1615	1700
AMPERES TO 1.84 VPC										
NCN-9	78	110	124	144	167	190	225	280	340	340
NCN-11	94	132	150	176	207	237	281	350	425	425
NCN-13	108	152	177	210	239	273	338	420	510	510
NCN-15	123	172	201	240	287	325	394	490	595	595
NCN-17	137	192	224	269	332	367	450	560	680	680
NCN-19	156	219	254	306	377	423	506	630	738	738
NCN-21	171	240	280	336	422	466	563	700	820	820
NCN-23	191	268	310	374	459	521	619	770	869	869
NCN-25	207	290	339	404	504	573	675	840	948	948
NCN-27	222	312	364	437	549	620	731	910	1027	1027
NCN-29	246	344	402	480	586	677	787	980	1085	1085
NCN-31	260	366	423	510	631	730	843	1050	1162	1162
NCN-33	276	387	452	538	672	786	900	1120	1240	1240
NCN-35	291	408	476	572	711	832	956	1190	1317	1317
AMPERES TO 1.86 VPC										
NCN-9	74	104	115	137	155	175	207	248	290	290
NCN-11	89	124	140	168	192	219	259	310	362	362
NCN-13	103	144	165	198	222	252	311	372	435	435
NCN-15	116	162	189	226	266	301	362	434	507	507
NCN-17	130	180	210	253	308	339	414	496	580	580
NCN-19	148	205	238	288	350	391	466	558	652	652
NCN-21	162	226	262	316	391	431	518	620	725	725
NCN-23	181	250	291	352	426	482	569	682	770	770
NCN-25	196	273	318	380	467	529	621	744	840	840
NCN-27	211	293	341	411	509	573	673	806	910	910
NCN-29	232	324	378	452	543	625	724	868	962	962
NCN-31	247	342	397	480	585	675	776	930	1031	1031
NCN-33	262	364	424	506	623	726	828	992	1100	1100
NCN-35	276	384	446	538	659	768	879	1054	1168	1168

The Energy to Challenge

Stryten Energy helps solve the world's most pressing energy challenges with a broad range of energy storage solutions and components across the Essential Power, Motive Power, Transportation, Military and Government sectors. Headquartered in Alpharetta, Georgia, we partner with some of the world's most recognized companies to meet the growing demand for reliable and sustainable energy storage capacity. Stryten powers everything from submarines to subcompacts, microgrids, warehouses, distribution centers, cars, trains and trucks. Our stored energy technologies include advanced lead, lithium and vanadium redox flow batteries, intelligent chargers and energy performance management software that keep people on the move and supply chains running.

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