FIRST NATIONAL BATTERY™
INDUSTRIAL (PTY) LTD

THROUGH CARING WE LEAD

Millennium Battery

ISO 14001: 2004

SANS IEC 60254-1,2: 1997

POSITIVE PLATE

The tubular plate construction incorporates low lead alloy spines in complete contact with the active material, which is retained by an outer gauntlet. This enables the electrolyte to penetrate freely, ensuring a high power output per unit volume.

NEGATIVE PLATE

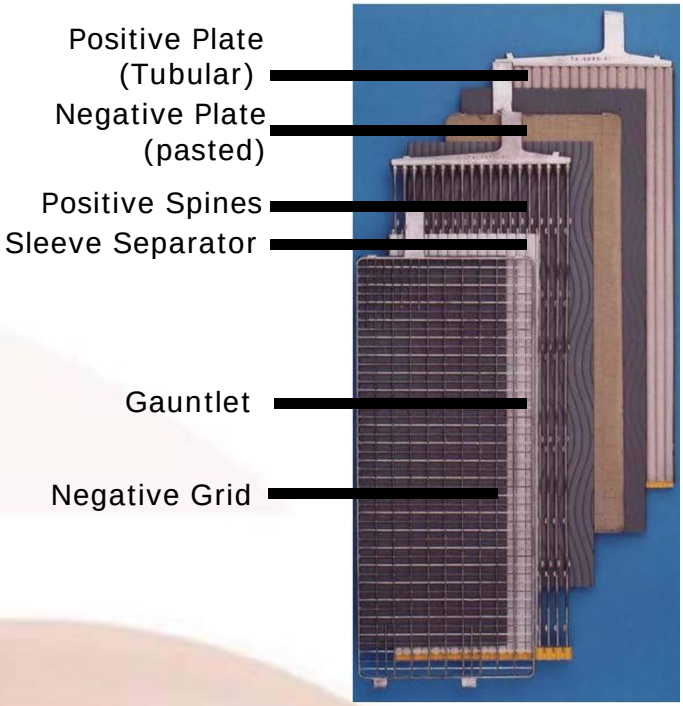
The negative plate is of a highly porous paste on an alloy grid. This compliments the positive plate construction, providing a balanced performance and superior life.

SLEEVE SEPARATORS

Separators are manufactured from microporous polyethylene. They are impervious to acid attack. The sleeve separator prevents short-circuiting caused by mossing.

MUD TRAP

Prevents possible shorting between plates due to active material shedding during the life of the cell.



CONTAINER AND LID

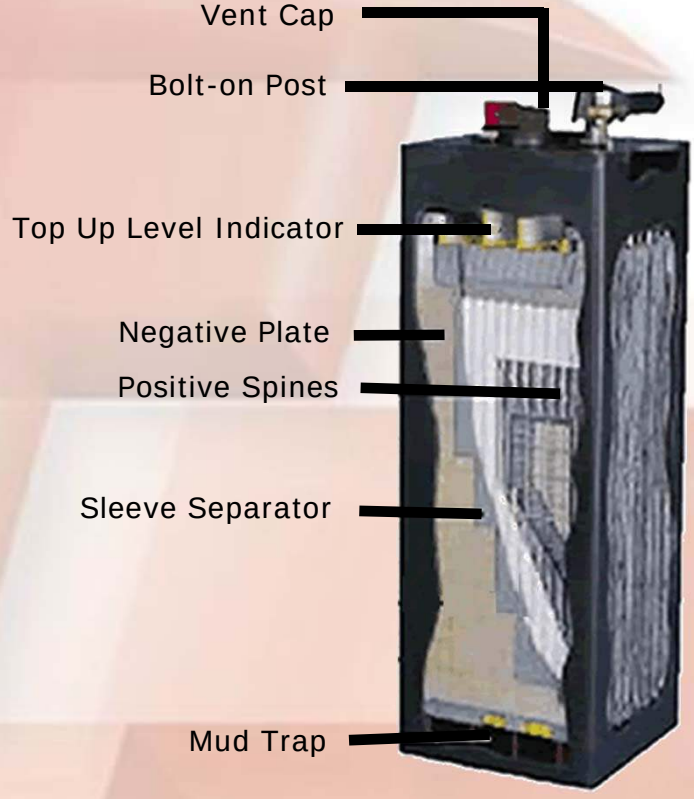
The lid is heat-sealed to the container ensuring a homogeneous bond. This is vital to mechanical strength and safety.

TOP UP LEVEL INDICATOR

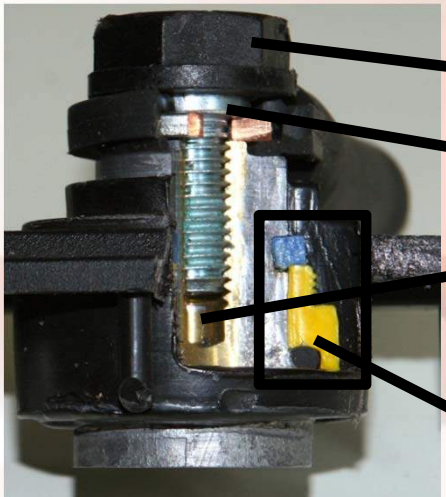
Two ribs on the separator guard serve both as level indicators, and to strengthen the guard.

SANTOPRENE® CONNECTORS

- Made of thermoplastic rubber
- Acid resistant
- Abrasion resistant
- Fatigue resistant
- More flexible than PVC cable
- Exceptional moulding bond eliminates contamination
- Built in “O” rings
- Easy and simple to connect



PERFECTSEAL® BOLT-ON POST



THREADED BRASS INSERT

Maximises terminal connector conductivity.

PERFECTSEAL ®

A polypropylene pressure bushing seated on a rubber O ring, locked in place by a polycarbonate ring. The cell lid is welded to the container, and polypropylene is injection moulded into the post to lid cavity. This design eliminates acid leaks through the post assembly.

RAYLITE™

Battery Specifications

Type	5 hr Capacity @ 30°C	Battery Dimensions (mm)			Connector Height (mm)	Weight (kg) ± 5%	
		Width (mm) "L"	Length (mm) "W"	Cover Height (mm) "H"		Dry	Wet
54 Ampere Hour Positive Plate							
MIL 15F	378	158	157	402	432	18.0	25.1
MIL 17F	432	158	157	402	432	19.5	27.3
MIL 17XF	432	158	173	402	432	18.5	26.0
MIL 19F	486	158	185	402	432	22.0	30.5
MIL 21F	540	158	205	402	432	24.0	33.1
MIL 21FD	540	158	205	402	432	24.8	33.9
MIL 23F	594	158	221	402	432	25.5	35.0
MIL 23FD	594	158	221	402	432	26.5	36.1
MIL 25F	648	158	237	402	432	28.6	3.0
MIL 25FD	648	158	237	402	432	31.0	41.4
MIL 25EFD	648	158	205	402	432	27.8	37.0
63 Ampere Hour Positive Plate							
MTL 19F	567	158	185	454	484	22.5	31.5
MTL 19XF	567	158	173	454	484	23.5	32.1
MTL 19EF	567	158	157	454	484	22.8	31.1
MTL 21F	630	158	205	454	484	27.0	37.0
MTL 21FD	630	158	205	454	484	28.0	38.0
MTL 23F	693	158	221	454	484	29.4	40.5
MTL 23FD	693	158	221	454	484	30.4	41.5
MTL 25F	756	158	237	454	484	32.0	45.2
MTL 27XF	819	158	237	454	484	35.5	48.0
73 Ampere Hour Positive Plate							
MTH 5E	146	158	45	515	545	6.0	8.5
MTH 21XF	730	158	185	515	545	31.5	42.8
MTH 21XFD	730	158	185	515	545	32.6	43.9
MTH 21F	730	158	205	515	545	29.0	41.4
MTH 23F	803	158	221	515	545	33.0	46.6
MTH 23XF	803	158	205	515	545	31.0	43.7
MHT 23EF	803	158	189	515	545	34.5	46.0
MTH 25F	876	158	237	515	545	40.2	55.0
MTH 25XF	876	158	221	515	545	38.5	52.5
MTH 25EFD	876	158	205	515	545	37.6	51.0
MTH 27XF	949	158	237	515	545	41.5	55.5
MTH 29EFD	1022	158	237	515	545	44.0	59.5
99 Ampere Hour Positive Plate							
MTE 21	990	158	205	692	722	41.0	57.1
MTE 21ED	990	158	173	692	722	42.4	56.0
MTE 25	118	158	237	692	722	50.0	67.7
MTE 25XD	118	158	221	692	722	55.6	72.0
MTE 27X	1287	158	237	692	722	57.5	76.2
MTE 27XD	1287	158	237	692	722	59.3	78.0
MTE 29ED	1386	158	237	692	722	55.3	74.0
MTE 21Q	990	158	205	692	722	41.0	57.1

F = FLAME RETARDANT POLYPROPYLENE CONTAINER & LID
E = STANDARD PITCH CONSTRUCTION
D = DOUBLE POST TERMINALS
X = EXPANDED PITCH CONSTRUCTION

Note: Operating S.G. = 1.290 ± 0.01

MMP CONNTECTORS (FROTEK)						
Cell Type	Cable Length "A" (mm)	Cross Section Area				
		25 mm²	35 mm²	50 mm²	70 mm²	95mm²
5 Plate F-F	75 ± 1.5	CB457		CB 482		
MTE 21ED / MTH 21XD	110 ± 2.0	CB 460	CB 473	CB 485	CB 498	CB510
MIL 23D / MTE25XD / MIL 21D / MTH 25ED / M-SOLAR (INTERCELL)	150 ± 2.0	CB 462	CB 475	CB 487	CB 499	
MIL 15 / MIL 17X / MTL 19E / MIL 25D / MTE 27XD / MTE 29ED	170 ± 2.0	CB 463	CB 476	CB 488	CB 500	CB 511
MIL 17 / MTL 17 / MTL 19X / MIL 25D	190 ± 2.0	CB 464	CB 477	CB 489	CB 501	CB 512
MIL 19 / MTL 19 / MTH 21X / MTH 23E	210 ± 3.0	CB 465	CB 478	CB 490	CB 502	CB 513
MIL – MTE 21 / MTH 25E / INTER TRAY 23 & 25	250 ± 3.0	CB 467	CB 480	CB 492	CB 504	CB 514
MIL 23 / MTL 23 / MTH 23 / MIL 25 / MTH25X / MTHE 25X / INTER TRAY 17/19 + 25/27	275 ± 3.0	CB 468		CB 493	CB 505	CB 515
M-SOLAR (INTER TRAY)	360 ± 3.0	CB 470	CB 549	CB 550	CB 551	
INTER CELL CONNECTORS - MINING	750 ± 5.0				CB 562	
5 PLATE E-E / MIL 15DS / MIL 25 DS	95 ± 1.5	CB 458	CB 471	CB 483	CB 497	CB 509
15 – 25 PLATE E-E	110 ± 2.0	CB 460	CB 473	CB 485	CB 498	CB 510
MIL 15 DS (INTER TRAY) E - E	170 ± 2.0	CB 463	CB 476	CB 488	CB 500	CB 511
MIL 25 DS (INTER TRAY) E - E	190 ± 2.0	CB 464	CB 477	CB 489	CB 501	CB 512
21/23, 23/25, 25/27 (INTER TRAY) E-E	380 ± 3.0			CB 495	CB 507	
INTER TRAY E-E	600 ± 5.0			CB 496	CB 508	

Cable Length "B" (mm)	Single End / Take Off Connectors				
	25 mm²	35 mm²	50 mm²	70 mm²	95mm²
115 ± 2.0	CB518	CB 524	CB 529	CB 535	CB 541
500 ± 5.0	CB 519	CB 525	CB 530	CB 536	CB 542
1200 ± 5.0	CB 520	CB 526	CB 531	CB 537	CB 543
1500 ± 5.0	CB 521	CB 527	CB 532	CB 538	CB 544
2000 ± 5.0	CB 522	CB 552	CB 533	CB 554	
4800 ± 5.0			CB 533	CB 539	CB 545

50MMP Connector Cross Sectional Area mm²				
Cell Type	MIL50	MTL	MTH	MTE
5 Plate	50	50		
15 Plate	50	50		
17 Plate	50	50		
19 Plate	50	50	70	70
21 Plate	50	50	70	70
23 Plate	50	70	70	95
25 Plate	50	70	70	95
27 Plate	70	70	70	95
29 Plate50	70	70	95	95