

CEIL



**MEGA
CHARGE™**

HIGH CYCLE LIFE

POWER OF MEGACHARGE:

CEIL MEGACHARGE offers superior cycle life in the same dimensional framework of the normal BIS or DIN range. It is the marrying of modern innovative design and latest state of the art manufacturing process which deliver the maximum cycle life to meet the ever-changing demand of Motive Power market.





IMPREGNATED GROMMET

The grommet has a special groove design and a strong interference with the terminal resulting in zero leakage or corrosion and minimum external shorts.



NEGATIVE GRID

The batteries use a patented low antimony grid to maintain low electrical resistance and ensure support for the negative active material. To obtain consistency of the highest levels, WIRTZ (USA) technology is applied.



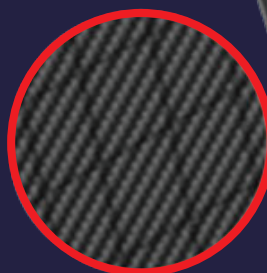
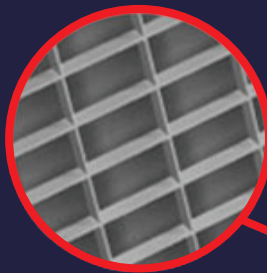
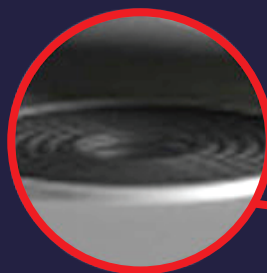
SEPARATOR

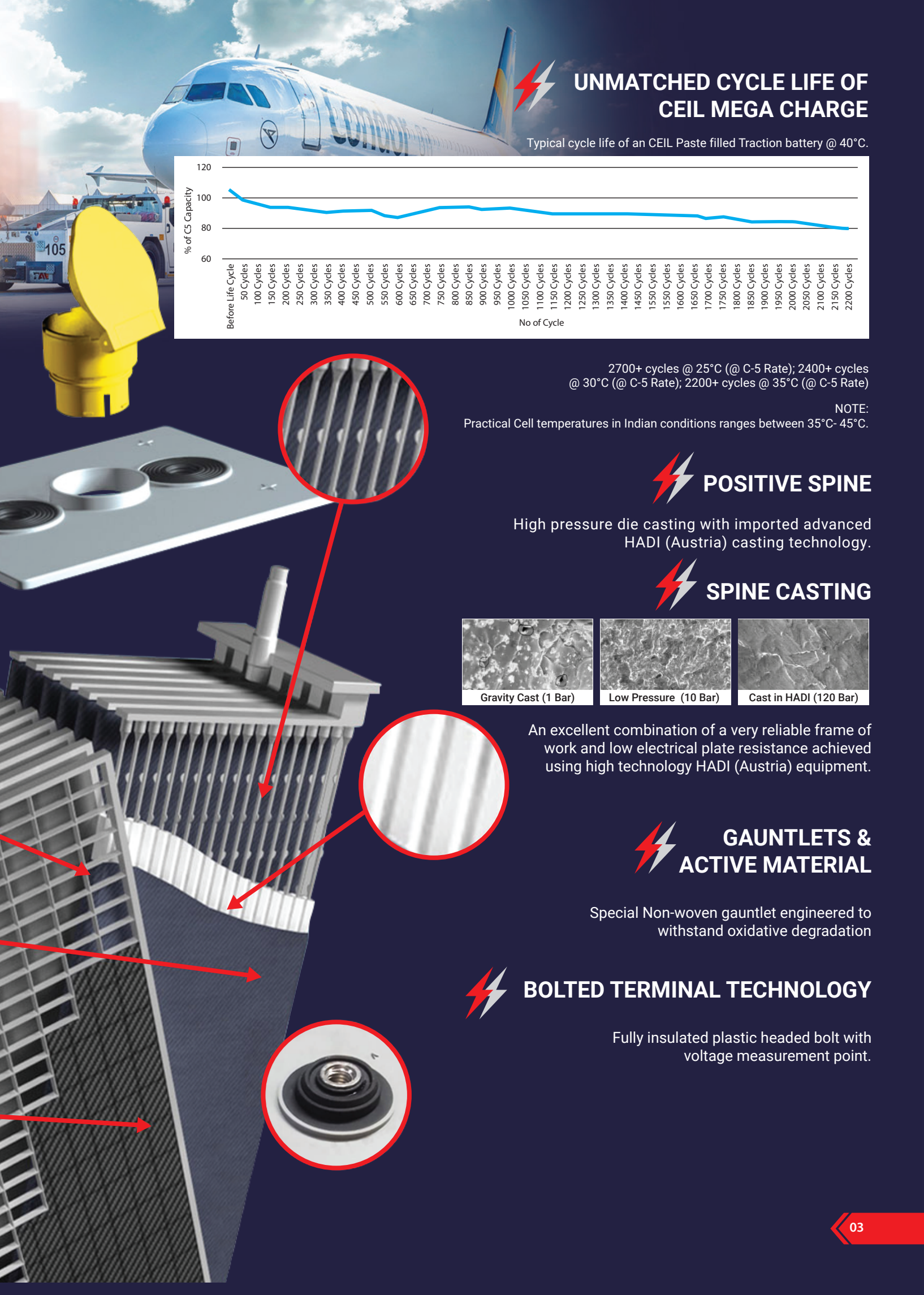
The low ionic resistance of microporous polythene separators ensures high battery power throughout the battery's life. Procured from sources, the separators have excellent oxidation and puncture resistance.



NEGATIVE ACTIVE MATERIAL

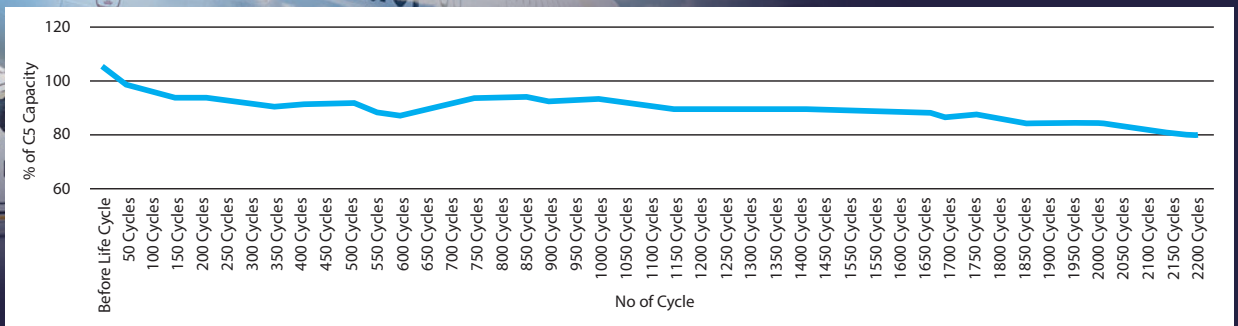
The composition of the negative active material has been specially derived to be perfectly complementary to the positive plate. This greatly enhances the longevity of the battery. In addition the pasting process uses state-of-the-art MAC (USA) machines for uniform density and texture throughout the surface area and ensures better active material retention.





UNMATCHED CYCLE LIFE OF CEIL MEGA CHARGE

Typical cycle life of an CEIL Paste filled Traction battery @ 40°C.



2700+ cycles @ 25°C (@ C-5 Rate); 2400+ cycles @ 30°C (@ C-5 Rate); 2200+ cycles @ 35°C (@ C-5 Rate)

NOTE:

Practical Cell temperatures in Indian conditions ranges between 35°C- 45°C.

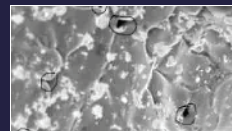


POSITIVE SPINE

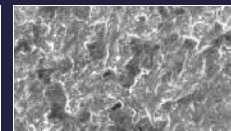
High pressure die casting with imported advanced HADI (Austria) casting technology.



SPINE CASTING



Gravity Cast (1 Bar)



Low Pressure (10 Bar)



Cast in HADI (120 Bar)

An excellent combination of a very reliable frame of work and low electrical plate resistance achieved using high technology HADI (Austria) equipment.



GAUNTLETS & ACTIVE MATERIAL

Special Non-woven gauntlet engineered to withstand oxidative degradation



BOLTED TERMINAL TECHNOLOGY

Fully insulated plastic headed bolt with voltage measurement point.



FEATURES:

Advanced tubular plate design to maximise the utilization & deliver longer life

Extensive Range: Available in both BS & DIN dimensions ensuring full compatibility and flexibility in all battery applications.

- BS: 84 Ah to 1404 Ah
- DIN: 160 Ah to 1550 A
- Batteries available in all voltage configurations (12V system to 110V system)

Global Compatibility: Conforms to internationally accepted IEC 60254 standard

Leak Proof: Specially designed fully insulated terminals & inter cell connectors secures any electrolyte leakage

SUPERIOR LONG-LIFE TECHNOLOGY:

Positive Spine: High pressure die casting with imported advanced HADI (Austria) casting technology

Positive Active Material: State of the art HADI (Austria) Paste filling for optimum packed density and zero annular void

Gauntlet: Special Non-woven gauntlet engineered to withstand oxidative degradation

Negative Plate: Low antimony negative plates with optimized active Material for enhanced deep cyclic performance

Separator: Micro porous polyethylene envelope separator design helps to increase acid volume & preventing the possibility of side shorts

Cell box/lid: High impact resistant polypropylene construction

Terminal Sealing: Impregnated grommet with special groove design and strong interference resulting zero leakage

Vent Plug: Push-fit vent plugs for correct electrolyte marking and easy fitment

In-house Formation: Fully automated continuous recirculation formation process in controlled condition ensures formation of all plates



BATTERY DESIGN FEATURES:



- **Inter cell connector:** Solid lead connectors for weld-on variant & cable connectors for bolt-on type for easy assembly and dismantling
- **Bolt:** Fully insulated plastic headed bolt with voltage measurement point
- **Tray:** MS Tray with corrosion resistant and durable coating; available in various sizes & colors
- **Battery connector:** Both DIN type and flat type connectors available
- **Exit lead cables:** Fully insulated color marked cables for short circuit prevention

AVAILABLE ACCESSORIES: (OPTIONAL):

Autofill System: An integrated piping system which allows topping up of batteries in an efficient and trouble-free manner with zero manual intervention

Battery Monitoring System: A highly intelligent data collection device which is mounted on the battery and can assist the user in improving the battery life

Electrolyte Level Indicator: A very simple but highly productive device which monitors the electrolyte level of battery and ensures optimal battery health

APPLICATION AREAS:

- Forklift Trucks
- Electric Vehicle
- Cleaning Equipment
- Hand Pallet Truck
- Lifting Platforms

PERFORMANCE:

- 2200+ cycles @ 35°C (@ C-5 Rate)
- 2400+ cycles @ 30°C (@ C-5 Rate)
- 2700+ cycles @ 25°C (@ C-5 Rate)





EXTRA CAPACITY, EXTRA LIFE



CEIL MEGA CHARGE RANGE

DIN RANGE OF CELLS (198 MM WIDE)

Type of Cell	Ah@C5 at 30°C	Cell Dimension in				Cell Weights in Kg.			Charging Current				
		Length +/-2mm	Width +/-2mm	Overall Height +/-5mm	Height upto Lid Top +/-5mm	Dry Weight (Kg.) +/-5%	Acid Volume (Ltr.)	Filled Weight (Kg.) +/-5%	Taper Charging Single Step Charger			Equalising rate (Amps.)	Constant Current charging rate (Amps.)
									at 2.1 vpc		at 2.5 vpc (Amps.)		
									Taper 2:1 (Amps)	Taper 1.7:1 (Amps.)			
EXWBF5	160	47	198	430	400	8.8	1.7	11.0	20.0	18.0	12.0	4.8	9.6
EXWBF7	240	65	198	430	400	12.5	2.7	16.0	30.0	27.0	18.0	7.2	14.4
EXWBF9	320	83	198	430	400	16.2	3.6	20.8	40.0	36.0	24.0	9.6	19.2
EXWBF11	400	101	198	430	400	19.9	4.4	25.6	50.0	45.0	30.0	12.0	24.0
EXWBF13	480	119	198	430	400	23.6	5.4	30.5	60.0	54.0	36.0	14.4	28.8
EXWBF15	560	137	198	430	400	27.3	6.2	35.3	70.0	63.0	42.0	16.8	33.6
EXWBF17	640	155	198	430	400	31.0	7.1	40.1	80.0	72.0	48.0	19.2	38.4
EXWBF19	720	173	198	430	400	34.7	8.0	45.0	90.0	81.0	54.0	21.6	43.2
EXWBF21	800	191	198	430	400	38.4	8.8	49.8	100.0	90.0	60.0	24.0	48.0
EXWCF5	180	47	198	490	460	9.3	2.0	11.9	22.5	20.3	13.5	5.4	10.8
EXWCF7	270	65	198	490	460	13.5	3.1	17.6	33.8	30.4	20.3	8.1	16.2
EXWCF9	360	83	198	490	460	17.6	4.2	23.0	45.0	40.5	27.0	10.8	21.6
EXWCF11	450	101	198	490	460	21.8	5.1	28.4	56.3	50.6	33.8	13.5	27.0
EXWCF13	540	119	198	490	460	26.0	6.2	34.0	67.5	60.8	40.5	16.2	32.4
EXWCF15	630	137	198	490	460	30.1	7.2	39.4	78.8	70.9	47.3	18.9	37.8
EXWCF17	720	155	198	490	460	34.3	8.2	44.9	90.0	81.0	54.0	21.6	43.2
EXWCF19	810	173	198	490	460	38.4	9.3	50.4	101.3	91.1	60.8	24.3	48.6
EXWCF21	900	191	198	490	460	42.6	10.2	55.8	112.5	101.3	67.5	27.0	54.0
EHXWCF5	210	47	198	540	510	10.5	2.2	13.4	26.3	23.6	15.8	6.3	12.6
EHXWCF7	315	65	198	540	510	15.3	3.5	19.7	39.4	35.4	23.6	9.5	18.9
EHXWCF9	420	83	198	540	510	19.9	4.6	25.9	52.5	47.3	31.5	12.6	25.2
EHXWCF11	525	101	198	540	510	24.6	5.7	32.0	65.6	59.1	39.4	15.8	31.5
EHXWCF13	630	119	198	540	510	29.3	6.9	38.2	78.8	70.9	47.3	18.9	37.8
EHXWCF15	735	137	198	540	510	34.0	8.0	44.3	91.9	82.7	55.1	22.1	44.1
EHXWCF17	840	155	198	540	510	38.7	9.1	50.5	105.0	94.5	63.0	25.2	50.4
EHXWCF19	945	173	198	540	510	43.4	10.3	56.8	118.1	106.3	70.9	28.4	56.7
EHXWCF21	1050	191	198	540	510	48.1	11.4	62.9	131.3	118.1	78.8	31.5	63.0
EXWEF5	250	47	198	601	571	11.9	2.5	15.1	31.3	28.1	18.8	7.5	15.0
EXWEF7	375	65	198	601	571	17.3	3.9	22.4	46.9	42.2	28.1	11.3	22.5
EXWEF9	500	83	198	601	571	22.7	5.2	29.4	62.5	56.3	37.5	15.0	30.0
EXWEF11	625	101	198	601	571	28.0	6.4	36.2	78.1	70.3	46.9	18.8	37.5
EXWEF13	750	119	198	601	571	33.4	7.8	43.4	93.8	84.4	56.3	22.5	45.0
EXWEF15	875	137	198	601	571	38.7	9.0	50.3	109.4	98.4	65.6	26.3	52.5
EXWEF17	1000	155	198	601	571	44.1	10.3	57.3	125.0	112.5	75.0	30.0	60.0
EXWEF19	1125	173	198	601	571	49.4	11.6	64.4	140.6	126.6	84.4	33.8	67.5
EXWEF21	1250	191	198	601	571	54.8	12.8	71.3	156.3	140.6	93.8	37.5	75.0
ELXWFF5	280	47	198	715	685	13.8	3.0	17.7	35.0	31.5	21.0	8.4	16.8
ELXWFF7	420	65	198	715	685	20.2	4.7	26.2	52.5	47.3	31.5	12.6	25.2
ELXWFF9	560	83	198	715	685	26.4	6.3	34.5	70.0	63.0	42.0	16.8	33.6
ELXWFF11	700	101	198	715	685	32.7	7.7	42.6	87.5	78.8	52.5	21.0	42.0
ELXWFF13	840	119	198	715	685	38.9	9.3	51.0	105.0	94.5	63.0	25.2	50.4
ELXWFF15	980	137	198	715	685	45.2	10.8	59.1	122.5	110.3	73.5	29.4	58.8
ELXWFF17	1120	155	198	715	685	51.5	12.3	67.4	140.0	126.0	84.0	33.6	67.2
ELXWFF19	1260	173	198	715	685	57.8	14.0	75.8	157.5	141.8	94.5	37.8	75.6
ELXWFF21	1400	191	198	715	685	64.1	15.4	83.9	175.0	157.5	105.0	42.0	84.0
EXWFF5	310	47	198	742	712	14.8	3.2	18.9	38.8	34.9	23.3	9.3	18.6
EXWFF7	465	65	198	742	712	21.5	4.9	27.8	58.1	52.3	34.9	14.0	27.9
EXWFF9	620	83	198	742	712	28.0	6.5	36.5	77.5	69.8	46.5	18.6	37.2
EXWFF11	775	101	198	742	712	34.6	8.1	45.0	96.9	87.2	58.1	23.3	46.5
EXWFF13	930	119	198	742	712	41.1	9.8	53.8	116.3	104.6	69.8	27.9	55.8
EXWFF15	1085	137	198	742	712	47.7	11.3	62.3	135.6	122.1	81.4	32.6	65.1
EXWFF17	1240	155	198	742	712	54.3	12.9	71.0	155.0	139.5	93.0	37.2	74.4
EXWFF19	1395	173	198	742	712	60.9	14.6	79.8	174.4	156.9	104.6	41.9	83.7
EXWFF21	1550	191	198	742	712	67.5	16.1	88.3	193.8	174.4	116.3	46.5	93.0



EXTRA CAPACITY, EXTRA LIFE

CEIL MEGA CHARGE RANGE

BS RANGE OF CELLS (158 MM WIDE)



Type of Cell	Ah@C5 at 30°C	Cell Dimension in				Cell Weights in Kg.			Charging Current				
		Length +/-2mm	Width +/-2mm	Overall Height +/-5mm	Height upto Lid Top +/-5mm	Dry Weight (kg) +/-5%	Acid Volume (Ltr.)	Filled Weight (kg.) +/-5%	Taper charging Single Step Charger			Equalising rate (Amps.)	Constant Current charging rate (Amps.)
									at 2.1 vpc		at 2.5 vpc		
									Taper 2:1 (Amps)	Taper 1.7:1 (Amps)			
EXIMF5	84	47	158	353	323	5.3	1.3	6.9	10.5	9.5	6.3	2.5	5.0
EXIMF7	126	61	158	353	323	7.4	1.8	9.7	15.8	14.2	9.5	3.8	7.6
EXIMF9	168	77	158	353	323	9.5	2.3	12.5	21.0	18.9	12.6	5.0	10.1
EXIMF11	210	93	158	353	323	11.6	2.8	15.2	26.3	23.6	15.8	6.3	12.6
EXIMF13	252	109	158	353	323	13.7	3.3	18.0	31.5	28.4	18.9	7.6	15.1
EXIMF15	294	125	158	353	323	15.8	3.8	20.7	36.8	33.1	22.1	8.8	17.6
EXIMF17	336	141	158	353	323	18.0	4.3	23.6	42.0	37.8	25.2	10.1	20.2
EXIMF19	378	157	158	323	323	20.7	4.8	26.9	47.3	42.5	28.4	11.3	22.7
EXIMF21	420	173	158	353	323	22.8	5.3	29.7	52.5	47.3	31.5	12.6	25.2
EXIMF23	462	189	158	353	323	24.9	5.8	32.4	57.8	52.0	34.7	13.9	27.7
EXIMF25	504	205	158	353	323	27.0	6.3	35.3	63.0	56.7	37.8	15.1	30.2
EXIMF27	546	221	158	353	323	29.1	6.8	37.9	68.3	61.4	41.0	16.4	32.8
EXILF5	110	47	158	430	400	6.4	1.6	8.4	13.8	12.4	8.3	3.3	6.6
EXILF7	165	61	158	430	400	9.0	2.2	11.8	20.6	18.6	12.4	5.0	9.9
EXILF9	220	77	158	430	400	11.6	2.8	15.3	27.5	24.8	16.5	6.6	13.2
EXILF11	275	93	158	430	400	14.5	3.4	18.8	34.4	30.9	20.3	8.3	16.5
EXILF13	330	109	158	430	400	17.1	4.0	22.3	41.3	37.1	24.8	9.9	19.8
EXILF15	385	125	158	430	400	19.8	4.6	25.7	48.1	43.3	28.9	11.6	23.1
EXILF17	440	141	158	430	400	22.5	5.3	29.3	55.0	49.5	33.0	13.2	26.4
EXILF19	495	157	158	430	400	25.7	5.9	33.3	61.9	55.7	37.1	14.9	29.7
EXILF21	550	173	158	430	400	28.3	6.5	36.7	68.8	61.9	41.3	16.5	33.0
EXILF23	605	189	158	430	400	31.1	7.1	40.3	75.6	68.1	45.4	18.2	36.3
EXILF25	660	205	158	430	400	33.7	7.7	43.7	82.5	74.3	49.5	19.8	39.6
EXILF27	715	221	158	430	400	36.4	8.3	47.1	89.4	80.4	53.6	21.5	42.9
EXTLF5	130	47	158	480	450	7.2	1.8	9.5	16.3	14.6	9.8	3.9	7.8
EXTLF7	195	61	158	480	450	10.2	2.4	13.4	24.4	21.9	14.6	5.9	11.7
EXTLF9	260	77	158	480	450	13.3	3.1	17.4	32.5	29.3	19.5	7.8	15.6
EXTLF11	325	93	158	480	450	16.4	3.7	21.2	40.6	36.6	24.4	9.8	19.5
EXTLF13	390	109	158	480	450	19.4	4.5	25.2	48.8	43.9	29.3	11.7	23.4
EXTLF15	455	125	158	480	450	22.5	5.1	29.1	56.9	51.2	34.1	13.7	27.3
EXTLF17	520	141	158	480	450	25.6	5.9	33.2	65.0	58.5	39.0	15.6	31.2
EXTLF19	585	157	158	480	450	29.2	6.5	37.7	73.1	65.8	43.9	17.6	35.1
EXTLF21	650	173	158	480	450	32.2	7.2	41.5	81.3	73.1	48.8	19.5	39.0
EXTLF23	715	189	158	480	450	35.4	7.9	45.6	89.4	80.4	53.6	21.5	42.9
EXTLF25	780	205	158	480	450	38.4	8.9	49.5	97.5	87.8	58.5	23.4	46.8
EXTLF27	845	221	158	480	450	41.5	9.2	53.4	105.6	95.1	63.4	25.4	50.7



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Type of Cell	Ah@C5 at 30°C	Cell Dimension in				Cell Weights in Kg.			Charging Current				
		Length +/- 2mm	Width +/- 2mm	Overall Height +/- 5mm	Height upto Lid Top +/- 5mm	Dry Weight (kg) +/- 5%	Acid Volume (Ltr.)	Filled Weight (kg.) +/- 5%	Taper charging Single Step Charger			Equalising rate (Amps.)	Constant Current charging rate (Amps.)
									at 2.1 vpc		at 2.5 vpc		
									Taper 2:1 (Amps)	Taper 1.7:1 (Amps)			
										(Amps.)			
EXTOF5	172	47	158	597	567	8.8	2.2	11.7	21.5	19.4	12.9	5.2	10.3
EXTOF7	258	61	158	597	567	12.8	3.0	16.7	32.3	29.0	19.4	7.7	15.5
EXTOF9	344	77	158	597	567	16.7	3.9	21.7	43.0	38.7	25.8	10.3	20.6
EXTOF11	430	93	158	597	567	20.6	4.7	26.6	53.8	48.4	32.3	12.9	25.8
EXTOF13	516	109	158	597	567	24.5	5.6	31.7	64.5	58.1	38.7	15.5	31.0
EXTOF15	602	125	158	597	567	28.4	6.4	36.7	75.3	67.7	45.2	18.1	36.1
EXTOF17	688	141	158	597	567	32.4	7.3	41.9	86.0	77.4	51.6	20.6	41.3
EXTOF19	774	157	158	597	567	36.9	8.1	47.4	96.8	87.1	58.1	23.2	46.4
EXTOF21	860	173	158	597	567	40.7	9.0	52.3	107.5	96.8	64.5	25.8	51.6
EXTOF23	946	189	158	597	567	44.7	9.9	57.5	118.3	106.4	71.0	28.4	56.8
EXTOF25	1032	205	158	597	567	48.6	10.7	62.5	129.0	116.1	77.4	31.10	61.9
EXTOF27	1118	221	158	597	567	52.6	11.5	67.5	139.8	125.8	83.9	33.5	67.1
ELXTEF5	200	47	158	634	604	9.6	2.4	12.6	25.0	22.5	15.0	6.0	12.0
ELXTEF7	300	61	158	634	604	13.9	3.3	18.1	37.5	33.8	22.5	9.0	18.0
ELXTEF9	400	77	158	634	604	18.2	4.2	23.6	50.0	45.0	30.0	12.0	24.0
ELXTEF11	500	93	158	634	604	22.4	5.0	28.9	32.5	56.3	37.5	15.0	30.0
ELXTEF13	600	109	158	634	604	26.7	6.0	34.5	75.0	67.5	45.0	18.0	36.0
ELXTEF15	700	125	158	634	604	31.0	6.9	39.8	87.5	78.8	52.5	21.0	42.0
ELXTEF17	800	141	158	634	604	35.3	7.9	45.5	100.0	90.0	60.0	24.0	48.0
ELXTEF19	900	157	158	634	604	40.1	8.8	51.5	112.5	101.3	67.5	27.0	54.0
ELXTEF21	1000	173	158	634	604	44.3	9.7	56.8	125.0	112.5	75.0	30.0	60.0
ELXTEF23	1100	189	158	634	604	48.7	10.6	62.4	137.5	123.8	82.5	33.0	66.0
ELXTEF25	1200	205	158	634	604	52.9	11.5	67.8	150.0	135.0	90.0	36.0	72.0
ELXTEF27	1300	221	158	634	604	57.2	12.4	73.2	162.5	146.3	97.5	39.0	78.0
EXTEF5	216	47	158	708	678	10.7	2.6	14.1	27.0	24.3	16.2	6.5	13.0
EXTEF7	324	61	158	708	678	15.5	3.6	20.2	40.5	36.5	24.3	9.7	19.4
EXTEF9	432	77	158	708	678	20.3	4.7	26.3	54.0	48.6	32.4	13.0	25.9
EXTEF11	540	93	158	708	678	25.0	5.6	32.3	67.5	60.8	40.5	16.2	32.4
EXTEF13	648	109	158	708	678	29.8	6.7	38.4	81.0	72.9	48.6	19.4	38.9
EXTEF15	756	125	158	708	678	34.5	7.6	44.4	94.5	85.1	56.7	22.7	45.4
EXTEF17	864	141	158	708	678	39.4	8.8	50.7	108.0	97.2	64.8	25.9	51.8
EXTEF19	972	157	158	708	678	44.7	9.7	57.3	121.5	109.4	72.9	29.2	58.3
EXTEF21	1080	173	158	708	678	49.3	10.7	63.2	135.0	121.5	81.0	32.4	64.8
EXTEF23	1188	189	158	708	678	54.3	11.8	69.5	148.5	133.7	89.1	35.6	71.3
EXTEF25	1296	205	158	708	678	59.0	12.8	75.6	162.0	145.8	97.2	38.9	77.8
EXTEF27	1404	221	158	708	678	63.8	13.7	81.6	175.5	158.0	105.3	42.1	84.2



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