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HIGH RATE BATTERIES

Assured XP



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Assured XP

High Rate Batteries

XP Series batteries incorporate advanced VRLA & TTP technology designed for ultra high rate performance in critical UPS & power supply applications. By using strong grids and double sided pasted plate insures extremely durable & consistent performance under high rate discharges.



Applications

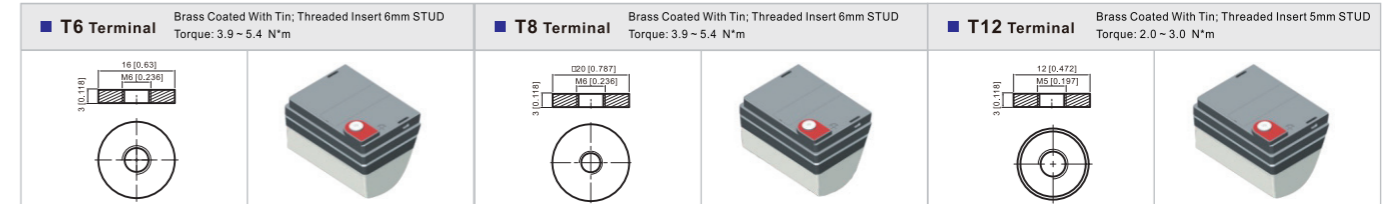
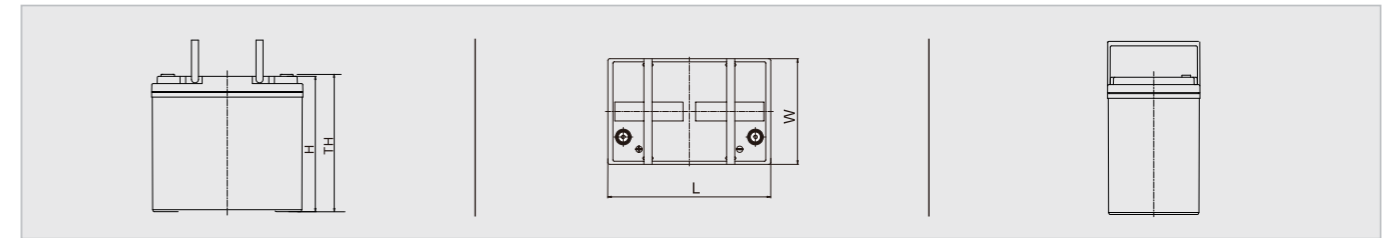
- UPS
- Hospitals and Testing Laboratories
- Emergency Power Supply
- Electric starting
- Telecommunications
- Data Centers

Features and benefits

- 100 to 540 WPC for 15 min to 1.67 VPC
- Virgin lead plates with copper alloy terminals inserts (low Resistance)
- Standard solid flame retardant ABS case and covers to UL94V-0
- Strong gravity casting grids for long life
- Automated COS & TTP welding for low resistance
- 100% initial capacity, voltage & internal resistance matched.
- Designed for critical high rate UPS applications 12 years design life
- UL recognized
- IEC60896-21 & 22, third party tested & compliant
- IATA approved for AIR freight

Dimensions & Terminal Options

Note: the figures below just show the appearance and dimension. For the positioning on each battery model, please check the specification



Specifications

Model	Rated Voltage (V)	Rated Capacity		Approx Dimension(mm)				Approx Weight (kg)	Terminal
		W ₁₅ (W/cell) @1.67V/cell	C ₂₀ (Ah) @1.80V/cell	L	W	H	TH		
XP12-100	12	100	27.6	164	125	174	174	8.4	T12-I/T12(M5)
XP12-150	12	150	35	195	130	164	167	10.44	T6-I(M6)
XP12-210	12	210	55	229	138	200	203	17.7	T6(M6)
XP12-300	12	300	82	260	168	208	211	24.2	T6(M6)
XP12-350	12	350	95	306	168	208	211	28.2	T6(M6)
XP12-400	12	400	101.6	325.5	170	213	216	31.6	T8(M6)
XP12-490	12	490	142	335	172	275	278	42.6	T8(M6)
XP12-540	12	540	155	335	172	275	278	42.4	T8(M6)

Discharge Performance

Constant Power Discharge

1.85V per cell -Constant Power (Watts/Cell) Discharge @ 25°C															
Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	163.9	112.8	89	72.8	53.8	39.4	32.4	18.8	13.6	10.9	9.26	7.95	6.27	5.14	2.74
XP12-150	250.7	170.8	133.5	110.2	81.4	59.7	47.4	26.4	18.7	14.8	12.3	10.5	8.05	6.71	3.55
XP12-210	286.3	210.7	177.9	147	118.6	85.2	68.2	38.5	27.7	21.9	18.3	15.8	12.6	10.5	5.46
XP12-300	374.2	285.7	247.8	217.9	168.9	127	102.5	58.4	41.9	32.9	27.4	23.7	18.8	15.8	8.30
XP12-350	441.2	347.2	289.2	245.8	190.7	141	114.9	67.8	49.2	38.8	32.2	27.7	21.8	18.2	9.58
XP12-400	476.2	379.1	330.9	275.3	213.1	155.8	117	68.1	50.4	40.6	34.2	29.7	23.4	19.3	10.2
XP12-490	497.8	424.6	377.4	329	263.7	203.4	162.9	96.6	70.3	56.2	47.3	41.1	32.7	27.3	14.3
XP12-540	537.7	441.9	383.5	339.5	273	209.1	172.5	102.8	74.4	59.5	49.8	43.5	34.9	29.5	15.6

1.80V per cell -Constant Power (Watts/Cell) Discharge @ 25°C

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	174.6	118.7	92.8	75.3	55.2	40.4	33.1	19.1	13.8	11	9.38	8.06	6.36	5.21	2.77
XP12-150	267	179.8	139.2	114	83.6	61.1	48.4	26.8	19	15	12.5	10.7	8.22	6.85	3.59
XP12-210	336.9	237	199.4	160.4	126.3	89.6	71.3	39.9	28.6	22.5	18.8	16.2	12.9	10.8	5.65
XP12-300	425	311.8	269	232.7	176.4	130.6	105.2	59.9	42.9	33.7	28.1	24.3	19.3	16.1	8.42
XP12-350	488.8	383	311.7	263.2	200.3	146.9	119.5	69.9	50.4	39.8	33.1	28.3	22.3	18.6	9.76
XP12-400	559.9	427.7	363	297.7	226.2	163	122.4	70.4	52.2	41.9	35.3	30.5	23.9	19.7	10.4
XP12-490	583.6	474.1	415.6	355.1	280.9	215	171.7	100.2	72.9	57.7	48.3	41.8	33.3	27.7	14.6
XP12-540	615.4	484.6	418.6	373.2	295	223.2	181.3	106.8	77.1	61.2	51.1	44.4	35.6	30	15.9

1.75V per cell -Constant Power (Watts/Cell) Discharge @ 25°C

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	181.9	122.6	95.3	77	56.4	41.1	33.6	19.4	14	11.1	9.49	8.14	6.42	5.25	2.80
XP12-150	278.3	185.7	143	116.5	85.3	62.2	49.2	27.2	19.3	15.2	12.6	10.8	8.33	6.94	3.66
XP12-210	385.5	259.9	213.5	170.1	131.3	92.7	73.4	41	29.2	22.9	19	16.4	13.1	10.9	5.75
XP12-300	478.5	346.7	290	244.5	182.2	133.6	107.2	61.3	43.7	34.3	28.6	24.7	19.6	16.3	8.53
XP12-350	540.1	416.3	334.1	278.8	208.8	152.2	123.4	71.1	51.3	40.3	33.5	28.9	22.7	18.8	9.93
XP12-400	623.5	466.1	387.8	313.9	237.8	169.2	128.6	72.5	53.4	42.9	35.9	31.1	24.4	20	10.6
XP12-490	661.2	532.2	451.5	377.7	293.7	224.2	179.2	103.3	75	59.3	49.5	42.9	33.9	28	14.8
XP12-540	710.1	534.9	459.8	400.9	314.2	235.1	190.2	110.7	79.2	62.5	52	45.2	36.1	30.4	16.2

1.70V per cell -Constant Power (Watts/Cell) Discharge @ 25°C

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	188.6	126.7	97.9	78.8	57.5	41.8	34.1	19.6	14.2	11.3	9.61	8.23	6.48	5.31	2.82
XP12-150	288.6	191.8	146.8	119.3	87.1	63.4	50	27.6	19.5	15.3	12.8	10.9	8.45	7.03	3.70
XP12-210	413	280	226.2	179	136.5	95.1	75.3	41.4	29.7	23.3	19.3	16.7	13.3	11	5.81
XP12-300	520.7	371.7	305.4	257.5	189.6	137.9	109.5	61.9	44.4	34.9	29.1	25	19.8	16.5	8.61
XP12-350	592	446.5	351.5	293.6	217	157.4	126.2	72.1	52	41.1	34.1	29.2	23	19.1	10.0
XP12-400	673.9	490.7	404	325.8	244.9	174.9	133	74.7	54.8	43.6	36.4	31.4	24.6	20.2	10.7
XP12-490	722.4	566.4	476.7	397.6	306.2	233	185.4	106.7	76.5	60.3	50.4	43.4	34.3	28.3	15.0
XP12-540	785.4	582.5	500.2	432.4	334.1	246.5	197.9	113.6	80.8	63.8	53	45.8	36.7	30.9	16.4

1.67V per cell -Constant Power (Watts/Cell) Discharge @ 25°C

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	193.6	129.5	100	80.2	58.4	42.4	34.6	19.8	14.3	11.4	9.68	8.3	6.53	5.34	2.84
XP12-150	296.1	196.1	150	121.5	88.4	64.2	50.7	27.8	19.7	15.5	12.9	11	8.62	7.12	3.75
XP12-210	443.8	293.8	240.8	187.2	140.6	98	77.1	42.3	30	23.6	19.6	16.9	13.4	11.2	5.89
XP12-300	571.4	401.7	324.6	267.6	196.7	141.4	112	62.7	44.9	35.3	29.4	25.2	20	16.7	8.72
XP12-350	649.4	474.3	374	307.6	226.1	162	129.1	73.1	52.7	41.6	34.4	29.6	23.3	19.3	10.2
XP12-400	731.1	516.5	422	328	248.8	176.3	135.4	76.5	55.9	44.5	37.2	32	25	20.4	10.7
XP12-490	777.5	602.9	505.7	416.4	320.5	242.5	191.8	109.9	78.2	61.7	51.1	44.1	34.6	28.6	15.2
XP12-540	852	635.1	540.1	456.6	346.4	255.5	203.8	116.8	82.8	65	53.9	46.6	37.2	31.2	16.5

1.60V per cell -Constant Power (Watts/Cell) Discharge @ 25°C

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	201.4	133.3	102.7	82.2	59.7	43.2	35.2	20.1	14.5	11.5	9.81	8.4	6.62	5.4	2.88
XP12-150	308.1	201.9	154.1	124.5	90.4	65.4	51.6	28.3	20	15.7	13	11.1	8.73	7.21	3.81
XP12-210	472.3	310.7	248.5	193.1	144.2	100.4	78.9	42.7	30.4	24	20	17.2	13.6	11.3	5.98
XP12-300	621.1	429	339.1	279	202.3	145.1	113.5	63.3	45.1	35.7	29.7	25.5	20.2	16.8	8.73
XP12-350	696.8	500	395	318.4	234.1	168.6	134.2	74.5	53.2	42	34.9	29.9	23.6	19.4	10.3
XP12-400	757.7	532.5	430.4	343.7	254.8	180.4	139.9	77.1	56.5	44.8	37.3	32.2	25	20.4	10.7
XP12-490	829.6	641.4	527.2	429.8	329.2	247	195.1	110.8	78.8	61.9	51.5	44.3	34.6	28.5	15.2
XP12-540	898.8	672.8	559.7	471.1	356.4	261.2	207.5	117.7	82.9	65.5	54.3	47.1	37.5	31.3	16.6

■ Constant Current Discharge

1.85V/cell Constant Current Discharge(Amperes)

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	86.6	59.3	46.5	37.8	27.8	20.3	16.7	9.58	6.92	5.51	4.69	4.02	3.16	2.59	1.37
XP12-150	132.5	89.8	69.7	57.2	42.1	30.8	24.4	13.5	9.53	7.5	6.23	5.31	3.93	3.26	1.72
XP12-210	147.1	107.6	90.4	74.4	59.7	42.6	34.1	19.2	13.7	10.8	8.99	7.75	6.16	5.13	2.64
XP12-300	192.4	146.1	126	110.2	85	63.6	51.2	29.1	20.7	16.2	13.5	11.6	9.19	7.7	4.02
XP12-350	226.8	177.5	147	123.1	96	70.6	57.3	33.7	24.4	19.1	15.8	13.6	10.7	8.84	4.63
XP12-400	244.7	193.8	168.2	139.3	107.2	78	58.4	33.8	25	20	16.8	14.6	11.4	9.37	4.94
XP12-490	261.7	220.7	194.8	168.9	134.5	103.1	82.1	48.4	35.1	28	23.4	20.2	16	13.3	6.93
XP12-540	282.7	229.7	197.9	173.4	139.3	106	87	51.5	37.2	29.6	24.6	21.4	17.1	14.3	7.57

1.80V/cell Constant Current Discharge(Amperes)

Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	93.2	62.8	48.7	39.3	28.7	20.9	17.1	9.76	7.03	5.59	4.76	4.08	3.21	2.62	1.38
XP12-150	142.5	95.1	73.2	59.5	43.4	31.6	25	13.7	9.69	7.61	6.32	5.39	4.03	3.35	1.75
XP12-210	175.1	122.4	102.4	81.9	64.2	45.2	35.9	20	14.2	11.2	9.28	7.97	6.33	5.26	2.75
XP12-300	220.7	161	138.1	118.8	89.5	65.9	52.9	30	21.4	16.7	13.9	12	9.46	7.86	4.10
XP12-350	253.9	197.8	160.1	133.1	101.7	74.1	60.1	35	25.1	19.8	16.3	14	10.9	9.07	4.75
XP12-400	290.9	220.9	186.4	152	114.8	82.3	61.5	35.2	26	20.8	17.5	15	11.7	9.6	5.08
XP12-490	310.5	248.5	216.5	183.6	144.4	109.9	87.2	50.6	36.7	28.9	24.1	20.8	16.4	13.6	7.10
XP12-540	327.4	254	218	192	151.7	114.1	92.1	54	38.8	30.7	25.5	22.1	17.6	14.7	7.75



1.75V/cell Constant Current Discharge(Ampere)															
Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	98.2	65.3	50.4	40.4	29.4	21.3	17.4	9.94	7.14	5.67	4.82	4.13	3.25	2.65	1.40
XP12-150	150.2	99	75.6	61.2	44.5	32.3	25.5	14	9.85	7.71	6.4	5.45	4.11	3.41	1.79
XP12-210	202.2	135.5	110.6	87.7	67.2	47.3	37.1	20.6	14.6	11.4	9.47	8.13	6.45	5.36	2.81
XP12-300	251.1	180.8	150.2	126	93.3	68	54.3	30.9	21.9	17.1	14.2	12.3	9.66	8	4.17
XP12-350	283.5	217	173.1	142.2	106.9	77.5	62.5	35.8	25.7	20.1	16.7	14.3	11.2	9.25	4.86
XP12-400	327.2	243	200.9	161.7	121.8	86.1	65.1	36.5	26.8	21.4	17.9	15.4	12	9.81	5.20
XP12-490	355	282.6	237.2	196.8	152.2	115.5	91.7	52.5	38	29.9	24.8	21.4	16.8	13.8	7.26
XP12-540	381.3	284.1	241.7	207.9	162.8	121.1	97.3	56.3	40.1	31.5	26.1	22.6	17.9	15	7.93

1.70V/cell Constant Current Discharge(Ampere)															
Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	102.8	68	52	41.6	30.2	21.8	17.7	10.1	7.25	5.75	4.89	4.18	3.28	2.68	1.41
XP12-150	157.3	102.9	78.1	62.9	45.7	33	26	14.2	9.99	7.82	6.49	5.52	4.2	3.48	1.82
XP12-210	219.3	147.6	118.6	93.2	70.6	48.9	38.4	21	15	11.7	9.69	8.32	6.59	5.45	2.86
XP12-300	276.4	196	160.1	134.1	98.1	70.9	55.9	31.4	22.4	17.6	14.6	12.5	9.82	8.14	4.24
XP12-350	314.3	235.4	184.2	151.3	112.3	80.9	64.5	36.6	26.2	20.6	17.1	14.6	11.4	9.43	4.94
XP12-400	357.7	258.7	211.8	169.6	126.7	89.8	67.8	37.9	27.6	21.9	18.2	15.7	12.2	10	5.26
XP12-490	391.7	303.6	253.1	208.7	159.8	120.9	95.6	54.7	38.9	30.5	25.4	21.8	17.1	14	7.38
XP12-540	425.9	312.2	265.5	225.9	174.3	127.9	102	58.2	41.2	32.3	26.7	23	18.3	15.3	8.06

1.67V/cell Constant Current Discharge(Ampere)															
Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	106.4	69.9	53.3	42.4	30.7	22.2	18	10.2	7.32	5.8	4.93	4.21	3.31	2.69	1.42
XP12-150	162.7	105.8	80	64.2	46.5	33.6	26.4	14.4	10.1	7.89	6.55	5.57	4.31	3.54	1.85
XP12-210	237.5	156	127	98.1	73.1	50.6	39.5	21.6	15.2	11.9	9.88	8.49	6.71	5.56	2.91
XP12-300	305.8	213.4	171.2	140.2	102.3	73	57.5	32	22.8	17.8	14.8	12.6	9.99	8.28	4.31
XP12-350	347.6	251.9	197.3	159.6	117.7	83.6	66.3	37.3	26.7	21	17.3	14.9	11.6	9.59	5.03
XP12-400	391.3	274.3	222.6	171.8	129.4	91.1	69.5	39	28.4	22.5	18.7	16.1	12.5	10.1	5.30
XP12-490	426	326.6	270.7	220.4	168.3	126.5	99.4	56.6	40.1	31.4	25.9	22.2	17.4	14.2	7.51
XP12-540	466.9	344	289.1	240.4	181.8	133.3	105.6	60.1	42.4	33.1	27.3	23.5	18.7	15.5	8.15

1.60V/cell Constant Current Discharge(Ampere)															
Model	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	7h	8h	10h	20h
XP12-100	112.8	72.8	55.2	43.7	31.5	22.7	18.4	10.4	7.45	5.9	5.01	4.27	3.35	2.73	1.44
XP12-150	172.6	110.3	82.8	66.1	47.7	34.4	26.9	14.6	10.3	8.03	6.65	5.65	4.4	3.62	1.90
XP12-210	255.6	166.8	132.4	102.2	75.7	52.4	40.8	22	15.5	12.2	10.1	8.73	6.88	5.68	2.99
XP12-300	336.2	230.3	180.7	147.6	106.3	75.7	58.8	32.6	23.1	18.2	15.1	12.9	10.2	8.43	4.36
XP12-350	377.1	268.5	210.6	166.7	123	88	69.6	38.3	27.2	21.4	17.7	15.2	11.9	9.76	5.16
XP12-400	410.1	285.9	229.4	181.8	133.8	94.1	72.4	39.7	28.9	22.8	18.9	16.3	12.6	10.3	5.33
XP12-490	463.5	354.8	287.3	232.3	176.4	131.3	103	58.1	41.1	32.1	26.6	22.7	17.7	14.5	7.63
XP12-540	502.7	372.2	305	253.4	191.1	138.9	109.5	61.7	43.2	34	28	24.2	19.1	15.9	8.36

Product Description

Construction	
Positive Plate	Lead-calcium grids minimize corrosion & prolongs life
Negative Plate	Balanced lead-calcium grids optimize recombination efficiency
AGM Separator	Mechanically strong, low electrical resistance, micro porous glass fiber which completely absorbs the electrolyte into its structure
Terminal Post	Lead casting terminal or threaded copper insert alternative (some models),the copper one provides maximum conductivity.
Venting Valve	EPDM Rubber0.44~2.18 PSI resealing pressure. Releasing at 1.45~5.08 PSI.
Container	ABS-Flame Retardant Containers to UL94V-0 is standard

Operating Temperature Range	
Nominal	25±3°C (77±5°F)
Discharge	-15°C~50°C (5°F~122°F)
Charge	-20°C~40°C(-4°F~104°F)With temperature compensated charger
Storage	-15°C~40°C(5°F~104°F)

Performance	
Recommended Maximum Charging Current Limit	Less than 0.25C A
Float Charging Voltage	13.5V~13.8V at 25°C,Temp. Coefficient -3mV/cell/°C
Maximum AC Ripple (Charger)	±0.02V/cell
Self-Discharge	Low self-discharge rate less than 3% /month @20°C
Equalize charge	13.8-14.4V at @25°C

Note: Design and/or specifications subject to change without notice. If questions arise, contact your local Leoch sales representative for clarification

