

TELECOM CATV SOLUTIONS

- Pure Lead Punched Grid
- Lithium Iron Phosphate (LiFePO₄)
- High Temperature Design
- VRLA-AGM
- Tubular Gel & Tubular Flooded



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LEOCH® TELECOM/CATV BATTERY RANGE

SERIES	LFELI SERIES	PLH SERIES	LHT SERIES	LPF SERIES	LPL SERIES	OPzS SERIES	OPzV SERIES	LPG/LPFG SERIES
TECHNOLOGY	LITHIUM IRON PHOSPHATE (LIFEPO4)	PURE LEAD	HIGH-TEMPERATURE ALLOY	FRONT TERMINAL AGM VRLA	AGM VRLA MONO BLOCK	TUBULAR FLOODED	TUBULAR GEL	FRONT & TOP TERMINAL GEL VRLA
COST	◆◆◆◆	◆◆◆◆	◆◆◆◆	◆◆◆	◆◆	◆◆◆◆	◆◆◆◆	◆◆◆◆
CAPACITY RANGE	(48V) 10-100 Ah	(12V) 38-210 Ah	(12V) 100-190Ah	(12V) 40-200Ah	(12V&2V) 6.5Ah-3000Ah	(2V) 100-3000Ah	(2V) 200-3000Ah	(2V) 100-3000Ah (12V) 65Ah-150Ah
DESIGN LIFE	20 Years	20 Years	2V:15Years 12V:10Years (95°F/35°C)	12 Years	2V 16Years 12V ≥38Ah 12Years 12V <38Ah 10-12Years	20 Years	20 Years	12V <38Ah 6Years 12V ≥38Ah 12Years 2V 16Years
SHELF LIFE	24 Months	24 Months	6 Months	6 Months	6 Months	6 Months	6 Months	9 Months
OPERATING TEMPERATURE	-4°F to 140°F (-20°C to 60°C)	-40°F to 149°F (-40°C to 65°C)	-40°F to 149°F (-40°C to 65°C)	-4°F to 122°F (-20°F to 50°F)	-4°F to 122°F (-20°C to 50°C)	5°F to 131°F (-15°C to 55°C)	-4°F to 131°F (-20°C to 55°C)	-4°F to 140°F (-20°C to 60°C)
FLAME RETARDANT	STANDARD	UL94V-0	UL94V-0	UL94V-0/ UL94HB	UL94V-0/ UL94HB	UL94V-0/ UL94HB	UL94V-0/ UL94HB	UL94V-0/ UL94HB
JAR TYPE	STEEL	ABS + PC	ABS + PC	ABS	ABS	SAN	ABS	ABS
TERMINAL TYPE	-	M6	M6, M8	M6, M8	M6, M8	M10 (2V)	M8	Flag M6.5, Insert M5, M6, M8

PLH SERIES-HIGH TEMPERATURE PURE LEAD VRLA AGM BATTERIES

Features & Benefits

- Capacity 38 to 210 Ah
- True Pure Lead Technology for exceptional performance
- Easy Installation - Ideal for 19"/23" standard cabinets
- Lower Float Current for long life
- Premium ABS+PC(FR)jar & cover to UL94V-0 & >28% LOI
- Highly automated COS & TTP welding
- 20 Year Design Life for Critical Telecom Applications
- Extreme temperature range, -40°F to 149°F (-40°C to 65°C)
- Low internal resistance with 2-year shelf life
- 100% Initial Capacity, Fast Charging Acceptance
- Large top post & brass front terminal adapter
- Front accessible gas port for air tight enclosures
- True Front Access Terminals - forward sliding safety shield for zero overhead space required
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



High Temperature Pure Lead Batteries

Applications

Critical Standby battery back-up applications where the energy is stored in reserve in batteries and ready for use whenever needed. Typical critical battery back-up applications are:

- Central Office/Switching Centers
- Network Access
- Passive Optical Lan
- In-building Wireless
- 5G Small Cells
- Macro Cell
- Microwave Towers
- Cellular Towers
- Edge Computing

Specifications

Model	Rated Voltage (V)	10hr@1.80 V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
PLH40FT(A)	12	38	298.7	97	184	184	12.5	T6(M6)
PLH62FT(A)	12	62	298.7	97	267	267	19.1	T6(M6)
PLH90FT(A)	12	90	405.4	108	287	287	28.7	T8(M6)
PLH100FT(A)	12	100	405.4	108	287	287	30.8	T8(M6)
PLH110FT(A)	12	110	559	125	227	227	36.5	T8(M6)
PLH150FT(A)	12	150	559	125	277	277	48	T8(M6)
PLH170FT(A)	12	170	559	125	320	320	54.2	T8(M6)
PLH190FT(A)	12	190	559	125	320	320	57.6	T8(M6)
PLH210FT(A)	12	210	559	125	328	328	60.5	T8(M6)

- Nominal capacity: 10 hour rate to 1.80Vpc @77°F(25°C)

LHT SERIES-HIGH TEMPERATURE VRLA AGM BATTERIES

Features & Benefits

- Capacity 100 to 1000Ah
- High Temperature paste formula customized for critical telecom applications
- Constructed using high-purity raw materials for longer life
- Long life design of up to 10 years (12V) and 15 years (2V) at 35°C
- Extreme Temperature Range: -40°F to 149°F (-40°C to 65°C)
- Premium ABS+PC (FR) jar & cover to UL94 V-0 & >28% LOI
- UL Recognized, NEBSTM 3 GR63, IEC 60896-21-22 and IATA Approved for Air Freight



Specifications

Model	Rated Voltage (V)	10hr@1.80 V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
LHT12-100	12	100	330	173	212	218	33.5	T11(M8)
LHT12-150	12	150	532	207	214	220	56	T11(M8)
LHT12-200	12	200	522	240	218	224	67.4	T11(M8)
LHT2-200	2	200	170	110	328	348	13.5	T11(M8)
LHT2-300	2	300	170	150	328	348	18.8	T11(M8)
LHT2-500	2	500	240	175	330	350	30	T11(M8)
LHT2-800	2	800	410	175	330	350	50.4	T11(M8)
LHT2-1000	2	1000	475	175	328	350	60	T11(M8)
LHTF12-100	12	100	394	110	286	286	31.5	T6(M6)
LHTF12-150	12	150	551	110	288	288	46.6	T6(M6)
LHTF12-200	12	190	560	126	320	320	59.5	T11(M8)



LPF/LPFG SERIES-FRONT TERMINAL VRLA AGM & GEL

Features & Benefits

- Capacity (12V)40-200Ah
- Virgin lead is used to make plates and paste alloy for long life
- Copper alloy terminal insert for low resistance
- Easy access to front terminals, speeds voltage & ohmic readings
- Solid ABS jar & covers (UL94V-0 Flame Retardant available)
- Strong gravity casted grids for long life
- Designed for Critical Telecom Application 12 yr design life
- Temperature Range: -4°F to 122°F(-20°C to 50°C)
- 100% initial capacity, & streamlined designed speeds installation
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



Specifications

Model	Rated Voltage (V)	20hr@1.8 0V/cell	10hr@1.8 0V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
LPF12-40	12	/	40	277	106	222	222	14.6	T6(M6)
LPF12-50	12	/	50	390	105	200	200	18.5	T6;M6
LPF12-55	12	/	55	277	106	222	222	17.3	T6(M6)
LPF12-70	12	/	70	564	114	187	187	25.5	T6(M6)
LPF12-75	12	/	75	564	114	187	187	26	T6(M6)
LPF12-90	12	/	90	394	110	285	285	31	T6(M6)
LPF12-100	12	/	100	394	110	286	286	31	T6(M6)
LPF12-100A	12	/	100	508	110	238.5	238.5	32	T13(M6)
LPF12-100(P)	12	/	100	405.4	108	287	287	29.8	T8(M6)
LPF12-125	12	/	125	551	110	288	288	41.5	T6(M6)
LPF12-150	12	/	150	551	110	288	288	44.8	T6(M6)
LPF12-150V	12	/	150	550	125	281.5	281.5	50.6	T8(M6)
LPF12-170	12	/	170	550	125	281.5	281.5	51	T8(M6) T11(M8)
LPF12-190(P)	12	/	190	559	125	320	320	56.8	T8(M6)
LPF12-190	12	/	190	560	126	320	320	57	T8(M6)
LPF12-200	12	/	200	560	126	320	320	61	T11(M8)
LPFG12-70	12	70	65	564	114	187	187	26.7	T6(M6)
LPFG12-100H	12	95	90	394	110	285	285	35	T6(M6)
LPFG12-150	12	138	130	551	110	288	288	47.4	T6(M6)
LPFG12-180	12	160	150	550	125	281.5	281.5	51.8	T8(M6)



LPL SERIES-SMALL MONO-BLOCK VRLA AGM BATTERIES

Features & Benefits

- Capacity 6.5 to 28Ah
- Virgin lead is used to make plates and paste alloy for long life
- Copper alloy terminal insert for low resistance
- Solid ABS jar & covers (UL94V-0 Flame Retardant available)
- Strong gravity casted grids for long life
- Designed for Critical Telecom Application 10 to 12 yr design life
- Temperature Range: -4°F to 122°F (-20°C to 50°C)
- 100% initial capacity
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



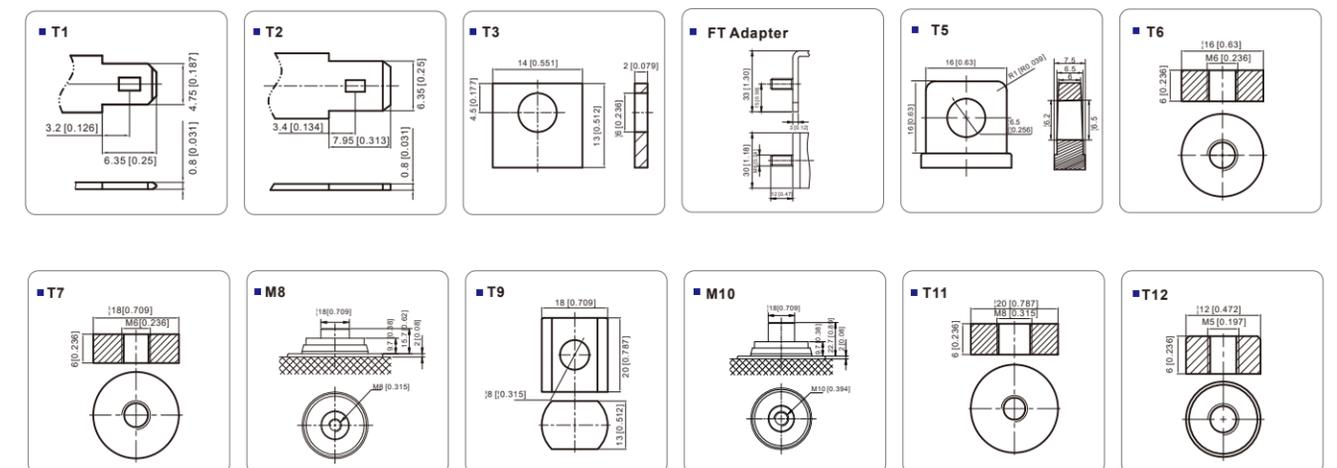
Mono-Block Battery Solutions
VRLA(Value Regulated Lead Acid)-AGM(Absorbed Glass Mat)

Specifications

Model	Rated Voltage (V)	20hr@1.75 V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
LPL6-6.5	6	6.5	150	34	94	100	1.26	T1/T2
LPL6-9.0	6	9	151	50.5	94	100	1.7	T1/T2
LPL6-11	6	11	151	50.5	94	100	1.95	T1/T2
LPL6-18	6	18	157	83	125	125	3.3	T3-A
LPL12-7.0	12	7	151	65	93.5	99.5	2.43	T1/T2
LPL12-12	12	12	151	98	95	101	3.87	T1/T2
LPL12-18	12	18	181.5	76.5	167.5	167.5	5.7	T3
LPL12-24	12	24	166	175	125	125	7.6	T12-I/T12(M5)
LPL12-28H	12	28	164	125	176	176	9.1	T3-A/T2
LPL12-28	12	28	166	175	125	125	8.2	T12/T12-I(M5)

LEOCH VRLA-AGM BATTERY TERMINAL OPTIONS

Unit:mm[Inch]



LPL SERIES-LARGE MONO-BLOCK VRLA AGM BATTERIES

Features & Benefits

- Capacity 38 to 250Ah
- Virgin lead is used to make plates and paste alloy for long life
- Solid ABS jar & covers (UL94V-0 Flame Retardant available)
- Copper alloy terminal insert for low resistance
- Strong gravity casted grids for long life
- Designed for Critical Telecom Application - 12 yr design life
- Temperature Range: -4°F to 122°F (-20°C to 50°C)
- 100% initial capacity
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



Specifications

Model	Rated Voltage (V)	10hr@1.80 V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
LPL12-38	12	38	197	165	170	170	12.7	T6(M6)
LPL12-40	12	40	197	165	170	170	14.5	T6(M6)
LPL12-45	12	45	197	165	170	170	14.2	T6(M6)
LPL12-55	12	55	229	138	210	230	17.7	T9
LPL12-60	12	60	260	168	210	216	20.7	T6(M6)
LPL12-65	12	65	348	167	178	178	21	T6(M6)
LPL12-70	12	70	348	167	178	178	23.1	T6(M6)
LPL12-75	12	75	260	168	208	214	22.7	T6(M6)
LPL12-90(P)	12	90	330	173	213	220	27.1	T11(M8)
LPL12-90H	12	90	330	173	212	220	29.5	T11(M8)
LPL12-100(P)	12	100	330	173	213	220	28.2	T11(M8)
LPL12-100	12	100	330	173	212	220	30.5	T11(M8)
LPL12-120	12	120	408	177	225	225	36.3	T11(M8)
LPL12-150	12	150	483	170	238.5	238.5	46.5	T11(M8)
LPL12-200	12	200	522	240	218	224	62.3	T11(M8)
LPL12-225	12	225	522	268	220	226	70.5	T11(M8)
LPL12-250	12	250	522	268	220	226	76.5	T11(M8)



LPL SERIES - SINGLE CELL AGM BATTERIES

Features & Benefits

- Capacity 100 to 3000Ah
- Virgin lead is used to make plates and paste alloy for long life
- Copper alloy terminal insert for low resistance
- Solid ABS jar & covers (UL94V-0 Flame Retardant available)
- Strong gravity casted grids for long life
- Designed for Critical Telecom Application - 16 yr design life
- Temperature Range: -4°F to 122°F (-20°C to 50°C)
- 100% initial capacity
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



Single-cell Jar Battery Solutions
VRLA(Value Regulated Lead Acid)

Specifications

Model	Rated Voltage (V)	10hr@1.80 V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
LPL2-100	2	100	170	72	205	214	5.7	T6(M6)
LPL2-200M	2	200	90	181	350	365	12.4	T11(M8)
LPL2-200	2	200	170	110	328	348	13.4	T11(M8)
LPL2-300	2	300	170	150	328	348	18.6	T11(M8)
LPL2-300M	2	300	124	181	350	365	18	T11(M8)
LPL2-400	2	400	210	175	330	350	25.5	T11(M8)
LPL2-400M	2	400	158	181	350	365	22.7	T11(M8)
LPL2-500	2	500	240	175	330	350	30	T11(M8)
LPL2-500M	2	500	191	181	350	365	28.4	T11(M8)
LPL2-600	2	600	300	175	330	350	37	T11(M8)
LPL2-600M	2	600	225	181	350	365	33.1	T11(M8)
LPL2-800M	2	800	303	181	350	365	44.5	T11(M8)
LPL2-800	2	800	410	175	330	350	50.4	T11(M8)
LPL2-1000M	2	1000	370	181	350	365	55.8	T11(M8)
LPL2-1000	2	1000	475	175	328	350	60	T11(M8)
LPL2-1500H	2	1500	282.5	230	539	549	91.5	T17(M8)
LPL2-1500M	2	1500	355	337	330	342	89.7	T11(M8)
LPL2-1600M	2	1600	355	337	330	342	91.7	T11(M8)
LPL2-2000H	2	2000	358	232	539	549	118.5	T17(M8)
LPL2-2000M	2	2000	476	337	330	342	118.7	T11(M8)
LPL2-3000M	2	3000	697	340	330	342	179.1	T11(M8)



LPG/LPFG SERIES - TOP & FRONT TERMINAL GEL VRLA AGM BATTERIES FOR OUTSIDE PLANT & CATV APPLICATIONS

Features & Benefits

- Capacity 17 to 3000Ah
- Virgin lead is used to make plates and paste alloy for long life
- Wider Operating Temperature: -4°F to 140°F(-20°C to 60°C)
- Copper alloy terminal insert for low resistance
- Solid ABS jar & covers (UL94V-0 Flame Retardant available)
- Strong gravity casted grids for long life
- Designed for Critical Telecom Application - 6 years(12V < 38Ah), 12 years(12V ≥38Ah) and 16 years(2V)
- Temperature Range: -4°F to 140°F(-20°C to 60°C)
- 100% initial capacity
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



Specifications

Model	Rated Voltage (V)	20hr@1.8 0V/cell	10hr@1.8 0V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
LPG12-17	12	17	/	181.5	76.5	167.5	167.5	5.8	T12-I(M5)
LPG12-24	12	24	/	166	175	125	125	8.5	T12-I(M5)
LPG12-31	12	30	/	195	130	164	178	10.2	T5
LPG12-38	12	38	/	197	165	170	170	12.8	T6(M6)
LPG12-45	12	45	/	257	132	200	200	15.5	T6(M6)
LPG12-50	12	50	/	229	138	205	211	16.1	T6(M6)
LPG12-60	12	60	/	255	170	174.5	177.5	18.5	T6(M6)
LPG12-65	12	65	/	325	167	174	174	20.5	T6(M6)
LPG12-70H	12	70	/	260	168	208	214	22.9	T6(M6)
LPG12-85	12	85	/	306	168	208	214	27.5	T6(M6)
LPG12-100	12	100	/	330	173	212	218	31.2	T11(M8)
LPG12-110	12	110	/	408	177	225	225	34.5	T11(M8)
LPG12-125	12	125	/	345	172	274	280	40	T11(M8)
LPG12-140	12	140	/	483	170	238.5	238.5	43.8	T11(M8)
LPG12-160	12	160	/	522	240	218	224	57.5	T11(M8)
LPG12-200	12	200	/	522	240	218	224	62.3	T11(M8)
LPG12-240	12	240	/	522	268	220	226	73.3	T11(M8)
LPG2-100	2	/	100	170	72	205	214	6	T6(M6)
LPG2-120	2	/	120	170	98	205	214	7.3	T7(M6)
LPG2-200	2	/	200	170	110	328	337	14.1	T11(M8)
LPG2-300	2	/	300	170	150	330	339	19.5	T11(M8)
LPG2-400	2	/	400	210	175	330	339	27	T11(M8)
LPG2-500	2	/	500	240	175	327.5	338	31.8	T11(M8)
LPG2-600	2	/	600	300	175	330	340	40	T11(M8)
LPG2-800	2	/	800	410	175	330	340	54	T11(M8)
LPG2-1000	2	/	1000	475	175	328	338	64.1	T11(M8)
LPG2-1500	2	/	1500	403	354	339	349	102	T11(M8)
LPG2-2000	2	/	2000	490	350	339	349	130	T11(M8)
LPG2-3000	2	/	3000	709	350	337	347	190	T11(M8)
LPFG12-100H	12	95	90	394	110	285	285	35	T6(M6)
LPFG12-150	12	138	130	551	110	288	288	47.4	T6(M6)
LPFG12-180	12	160	150	550	125	281.5	281.5	51.8	T8(M6)

OPzS SERIES - FLOODED TUBULAR BATTERIES

Features & Benefits

- Capacity 100 to 3000Ah
- Virgin lead is used to make plates and paste alloy for long life
- Copper alloy terminal insert for low resistance
- Wider Operating Temperature: 5°F to 131°F(-15°C to 55°C)
- Higher cycle life than flat plate batteries
- SAN transparent container, (Optional PC flame retardant material to UL94V-0)
- Small footprint and easily installed on standard or seismic racks
- Designed for Critical Telecom Application up to 20 yr design life
- Standard 1.240 Specific Gravity, with optional 1.215 SG
- 100% initial capacity
- IEC60896-11 Certified



Flooded Tubular Battery Solutions

Specifications

Model	Rated Voltage (V)	10hr@1.8 0V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Dry Weight (kg)	Terminal Type
20PzS100	2	100	103	206	355	410	13.2	8.1	T7-B(M10)
30PzS150	2	150	103	206	355	410	15.3	10.8	T7-B(M10)
40PzS200	2	200	103	206	355	410	17.4	12.9	T7-B(M10)
50PzS250	2	250	124	206	355	410	20.4	15.4	T7-B(M10)
60PzS300	2	300	145	206	355	410	23.8	17.8	T7-B(M10)
50PzS350	2	350	124	206	471	526	28.3	21.3	T7-B(M10)
60PzS420	2	420	145	206	471	526	32.7	24.5	T7-B(M10)
70PzS490	2	490	166	206	471	526	38	28.2	T7-B(M10)
60PzS600	2	600	145	206	646	701	45.4	33.4	T7-B(M10)
80PzS800	2	800	191	210	646	701	62.9	46.9	T7-B(M10)
100PzS1000	2	1000	233	210	646	701	77.4	57.4	T7-B(M10)
120PzS1200	2	1200	275	210	646	701	91.7	67.7	T7-B(M10)
120PzS1500	2	1500	275	210	796	851	113.8	83.8	T7-B(M10)
240PzS3000	2	3000	576	212	772	827	224.8	164.8	T7-B(M10)



OPzV SERIES -TUBULAR GEL BATTERIES

Features & Benefits

- Capacity 200 to 3000AH
- Virgin lead is used to make plates and paste alloy for long life
- Copper alloy terminal insert for low resistance
- Wider Operating Temperature: -4°F to 131°F(-20°C to 55°C)
- Higher cycle life than flat plate batteries
- Solid ABS jars & covers (UL94V-0 Flame Retardant available)
- Easy installation vertical or horizontal seismic modular racks
- Designed for Critical Telecom Application up to 20 yr design life
- 100% initial capacity
- UL Recognized,NEBSTM 3 GR63,IEC 60896-21-22 and IATA Approved for Air Freight



Specifications

Model	Rated Voltage (V)	100hr@1.8 0V/cell	10hr@1.8 0V/cell	L(mm)	W(mm)	H(mm)	TH(mm)	Gross Weight (kg)	Terminal Type
4OPzV200	2	260	200	103	206	355	390	18.8	T7-A(M8)
5OPzV250	2	325	250	124	206	355	390	22.4	T7-A(M8)
6OPzV300	2	390	300	145	206	355	390	26.4	T7-A(M8)
5OPzV350	2	455	350	124	206	471	506	29	T7-A(M8)
6OPzV420	2	546	420	145	206	471	506	34.5	T7-A(M8)
7OPzV490	2	637	490	166	206	471	506	39	T7-A(M8)
6OPzV600	2	780	600	145	206	646	681	48	T7-A(M8)
8OPzV800	2	1040	800	191	210	646	681	65.1	T7-A(M8)
10OPzV1000	2	1300	1000	233	210	646	681	78.5	T7-A(M8)
12OPzV1200	2	1560	1200	275	210	646	681	93	T7-A(M8)
12OPzV1500	2	1950	1500	275	210	796	831	115	T7-A(M8)
16OPzV2000	2	2600	2000	399	214	772	807	155	T7-A(M8)
20OPzV2500	2	3250	2500	487	212	772	807	196	T7-A(M8)
24OPzV3000	2	3900	3000	576	212	772	807	232	T7-A(M8)
12V9OPzV200	12	240	200	521	268	220	226	70	T11(M8)



RELAY RACKS, CABINETS, & CONVENTIONAL SEISMIC RACKS

Features & Benefits

- Standard, Seismic and NEBS" Relay Racks Available
- Tiered and Step racks built to your requirements



Racks & Cabinets specially designed to fit in tight spaces, for the Critical Telecom industry



Spill Containment and Safety Equipment are always readily available



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