



# unigy®

## HIGH RATE SERIES



**Absorbed valve-regulated, lead-acid battery technology designed for UPS standby power systems**

- 10 year design life
- Special epoxy post seal design eliminates leaks
- Exclusive tank formed plates optimize cell voltage balance and performance
- Advanced AGM technology for superior high-rate, short-term power
- Made in U.S.A...Your assurance of quality.



QUALITY SYSTEM  
CERTIFIED TO  
**ISO 9001**  
**ISO/TS 16949**



# EXCLUSIVE FEATURES OF THE HIGH RATE SERIES BATTERIES

## LOW PRESSURE SELF-SEALING VALVES

are 100% factory tested to prevent premature dry-out for dependable battery service. Flame arrestors are installed on all flame-retardant batteries for added safety.

## ADVANCED ABSORBED GLASS MAT (AGM) TECHNOLOGY

utilizes special micro-porous separators to absorb all the electrolyte lowering internal resistance, increasing power, maximizing space utilization and eliminating leaks for safe installation and storage.

## PUNCTURE RESISTANT GLASS MAT SEPARATORS

lowers internal resistance for superior high-rate power while protecting against failures and shorts for maximum life.

## HEAVIER, THICKER PLATES

are pasted from both sides for added durability and a ten-year design life.

## SPECIAL POSITIVE GRID ALLOY

with pure lead, low calcium and high tin delivers quick high-rate power.

## TANK FORMED PLATES

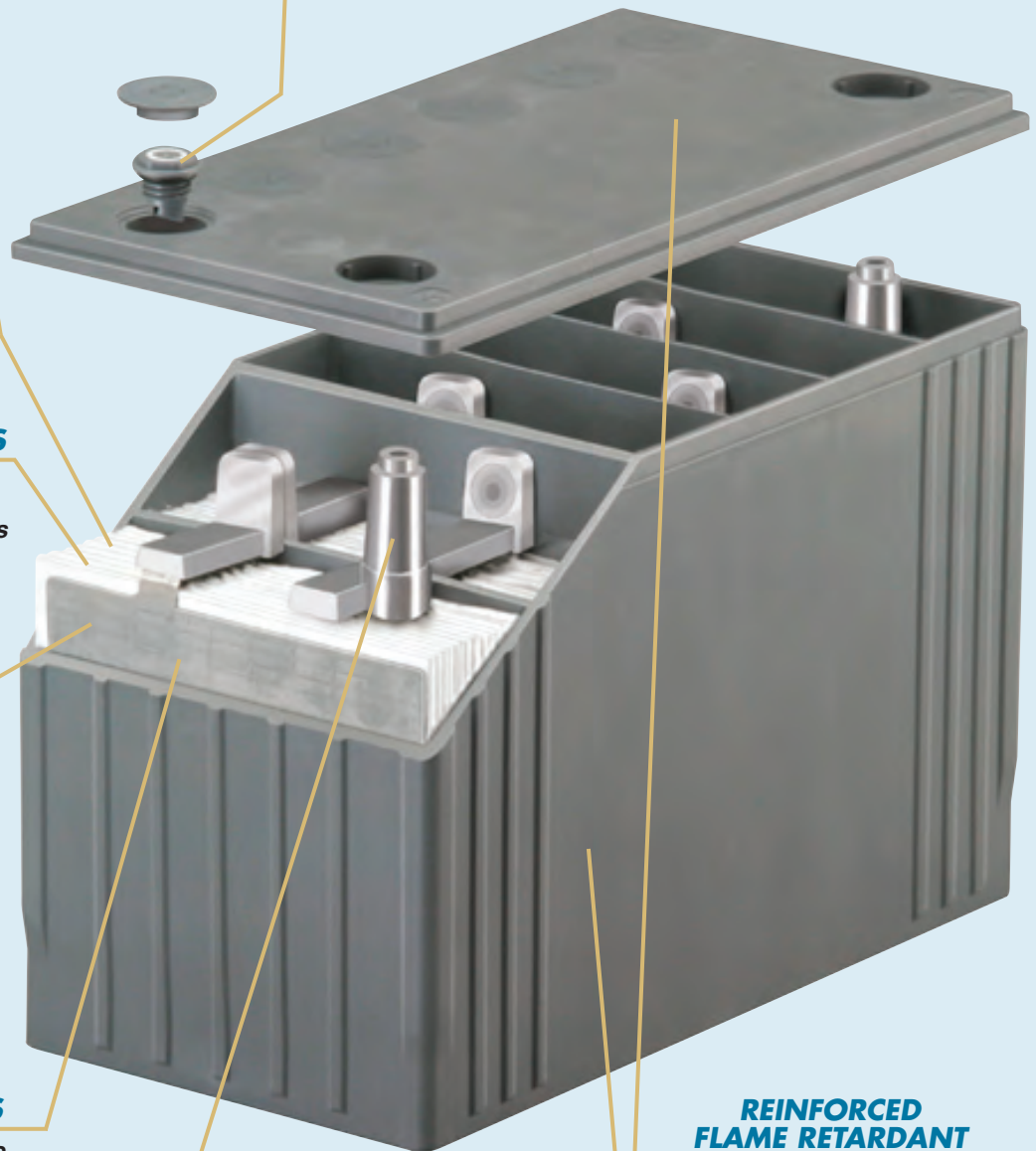
ensure full and uniform plate formation optimizing cell voltage balance and performance.

## TIN PLATED, COPPER THREADED INSERTED POSTS

for easy installation and maintenance ensuring the highest current-carrying capacities.

## EPOXY POST SEAL DESIGN

eliminates post leaks extending battery life and protecting sophisticated electronic equipment. A proven technology that is 100% factory tested to ensure long life and performance.



## EXCLUSIVE THRU-PARTITION WELD SEALS

ensure superior weld quality maximizing current transfer between cells.

## REINFORCED FLAME RETARDANT (RATED UL94, V0 28% LOI) POLYPROPYLENE OR STANDARD POLYPROPYLENE CASE AND COVER

resists bulging and meets safety requirements. Special reinforced design protects battery while providing added heat dissipation capabilities.

Uninterruptible power supplies (UPS) need instantaneous power in order to protect vital information or sustain critical emergency systems. The **DEKA UNIGY HIGH RATE SERIES** uses the latest AGM (Absorbed Glass Mat) technology to lower internal resistance for superior high-rate, short-term discharges delivering critical power when needed. With a 10-year design life it continues to deliver reliable standby power when conventional standby batteries might already have failed.

To help further ensure long-term performance, the **DEKA UNIGY HIGH RATE SERIES** features inserted posts with epoxy post seals that are 100% factory leak tested. The epoxy post seal acts as a secure barrier to keep in acid and critical pressure extending life and protecting sophisticated electronic equipment. For added strength and durability, these batteries are housed in reinforced flame-retardant (rated UL94, V0 28% LOI) polypropylene or standard polypropylene case and cover for long life performance.

It is also essential that backup batteries meet capacity ratings in order to satisfy the specific demands of backup systems. **DEKA UNIGY HIGH RATE BATTERIES** go through a series of over 250 stringent quality control checks and extensive testing to ensure the industry's most accurate and dependable ratings. In addition, all **DEKA UNIGY HIGH RATE** production facilities are certified to meet globally recognized ISO 9001 and TS16949 quality standards. All batteries shipped meet or exceed IEEE-485 capacity requirements.

- **Epoxy-sealed posts eliminate leaks**
- **Pure lead, low calcium, high tin positive grids deliver quick high-rate power**
- **Puncture resistant micro-porous glass mat separators extend life**
- **Tank formed plates optimize cell voltage balance and performance**
- **Reinforced flame retardant (rated UL94, V0 28% LOI) polypropylene or standard polypropylene case and cover resists bulging and meets safety requirements**
- **Flame arresting, low pressure, self-sealing valve on flame-retardant or low-pressure, self-sealing valve on standard maximizes gas recombination efficiency and minimizes gassing**
- **Computer-aided design and manufacturing ensure quality products through control of process and standards**
- **Case and cover heat sealed and 100% tested to prevent leaks**
- **Float Voltage: 2.25 volts per cell ± .01 VPC @ 77°F (25°C)**
- **D.O.T., I.C.A.O., I.M.D.G. and I.A.T.A. air transport approval pending**
- **Design life 10 years @ 77°F/25°C (full float)**
- **All batteries meet or exceed IEEE-485 capacity requirements at shipment**

Battery Type*	Overall Dimensions							
	Length		Width		Height		Weight	
	Inches	mm	Inches	mm	Inches	mm	lbs.	kgs.
<b>U1HR1500</b>	7.71	196	5.18	132	6.93	176	27	12
<b>45HR2000</b>	8.84	225	5.31	135	8.26	210	40	18
<b>24HR3000</b>	10.20	259	6.80	173	8.24	209	56	25
<b>27HR3500</b>	12.01	305	6.80	173	8.24	209	66	30
<b>31HR4000</b>	12.93	328	6.75	171	8.70	221	74	34
<b>31HR5000</b>	13.46	342	6.77	172	11.20	284	98	45

\* Part numbers for flame-retardant battery types: charcoal cover and case.  
 For standard battery type: Add "S" as suffix in part number, black cover and grey case.

**Storage: Batteries have a low self-discharge rate and can be stored for up to six months at 77°F/25°C without applying a boost charge.**

## DISCHARGE RATINGS\* IN WATTS PER CELL [at 77°F (25°C)]

Battery Type	Volts Per Cell (V.P.C.)	1 Min.	5 Min.	10 Min.	15 Min.	20 Min.	30 Min.	40 Min.	50 Min.	60 Min.
U1HR1500	1.80	—	206	141	108	89	66	53	46	39
	1.75	340	223	149	113	92	68	54	47	40
	1.70	376	237	156	117	95	69	55	48	40
	1.67	401	247	159	119	97	70	56	49	41
	1.60	452	256	162	121	98	71	57	49	41
45HR2000	1.80	—	253	189	151	127	97	79	69	58
	1.75	425	286	205	161	134	101	82	71	60
	1.70	450	300	212	166	137	103	83	72	61
	1.67	473	308	216	168	138	104	84	73	62
	1.60	512	322	222	172	141	105	85	74	62
24HR3000	1.80	—	386	284	227	192	147	121	107	91
	1.75	574	430	309	240	199	152	125	110	94
	1.70	639	463	326	249	204	154	128	112	96
	1.67	672	478	331	253	208	157	129	113	96
	1.60	746	506	342	259	212	159	130	114	97
27HR3500	1.80	—	459	348	279	233	179	147	128	108
	1.75	656	514	376	294	246	187	152	132	111
	1.70	748	559	399	309	254	190	155	134	113
	1.67	784	580	408	314	258	193	156	135	114
	1.60	885	616	420	320	263	196	159	137	115
31HR4000	1.80	—	585	432	342	283	214	174	151	128
	1.75	826	644	464	362	301	225	181	156	130
	1.70	905	686	488	374	307	228	183	158	132
	1.67	987	713	496	377	309	230	184	159	132
	1.60	1130	760	508	384	314	233	186	160	134
31HR5000	1.80	634	581	481	406	350	276	227	194	168
	1.75	752	663	530	440	375	290	236	200	173
	1.70	851	727	569	464	391	298	241	203	176
	1.67	885	760	588	475	397	301	244	205	177
	1.60	973	830	620	492	406	306	246	206	178

## DISCHARGE RATINGS\* IN AMPS PER CELL [at 77°F (25°C)]

Battery Type	Volts Per Cell	1 Min.	5 Min.	15 Min.	30 Min.	60 Min.	90 Min.	2 Hr.	3 Hr.	4 Hr.	8 Hr.	10 Hr.	20 Hr.	24 Hr.	100 Hr.
U1HR1500	1.80	—	111.2	56.8	34.2	20.0	14.5	11.4	8.04	6.27	3.39	2.76	1.44	1.21	0.30
	1.75	213.1	122.3	60.0	35.4	20.5	14.8	11.6	8.21	6.38	3.45	2.81	1.46	1.23	0.30
45HR2000	1.80	—	136.7	79.3	50.2	30.0	21.8	17.4	12.5	9.81	5.46	4.49	2.38	2.01	0.50
	1.75	266.7	157.0	85.4	52.4	31.0	22.6	17.8	12.7	10.05	5.56	4.56	2.42	2.04	0.51
24HR3000	1.80	—	208.9	119.0	76.1	46.8	33.7	26.6	19.1	15.1	8.31	6.80	3.57	3.02	0.75
	1.75	360.0	236.2	127.1	79.2	48.3	34.7	27.2	19.4	15.3	8.46	6.94	3.65	3.08	0.77
27HR3500	1.80	—	248.3	146.4	92.6	55.3	40.7	32.5	23.4	18.4	10.06	8.23	4.33	3.65	0.91
	1.75	411.8	282.2	156.0	97.4	57.3	41.6	33.2	23.9	18.7	10.26	8.40	4.41	3.71	0.93
31HR4000	1.80	—	316.2	179.5	110.8	65.5	47.0	37.1	26.2	20.3	10.81	8.80	4.58	3.85	0.96
	1.75	518.4	353.7	192.0	117.1	66.7	47.9	37.7	26.8	20.8	11.10	9.03	4.68	3.93	0.97
31HR5000	1.80	389.0	320.0	216.0	144.0	86.6	61.2	48.9	35.4	27.9	15.30	12.50	6.56	5.51	1.37
	1.75	474.0	369.0	238.0	153.0	89.5	62.9	50.1	36.1	28.5	15.60	12.70	6.66	5.59	1.39

\* Note: Above ratings conform to IEEE-485 standards.



### MK Battery

1631 South Sinclair Street • Anaheim, California 92806

Toll Free: 800-372-9253 • Tel: 714-937-1033 • Fax: 714-937-0818

Web: [mkbattery.com](http://mkbattery.com) • Email: [sales@mkbattery.com](mailto:sales@mkbattery.com)