



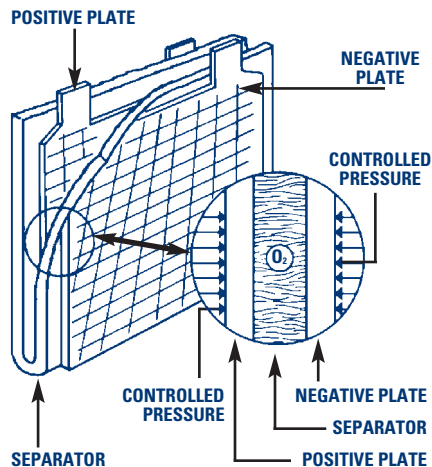
Deka AGM Series (Absorbed Glass Mat) for longer and safer battery operation



Deka's AGM (Absorbed Glass Mat) Series uses a special absorbed electrolyte technology that is superior to conventional lead-acid batteries. This completely sealed valve-regulated battery line eliminates gas emissions and acid leakage for longer and safer battery operation.

How AGM Works

Unlike conventional "flooded" lead-acid batteries, AGM sealed valve-regulated technology eliminates the need to add water because the oxygen and hydrogen gases react to maintain the necessary amounts of moisture. Highly porous microfiber separators wrapped around the positive plates completely absorb and trap the electrolyte, so there is no excess to spill or leak out of the battery. Oxygen formed from the positive plates during charging passes horizontally through the separator pores to the negative plates, where it reacts with hydrogen and changes back to water to replenish the electrolyte.



Oxygen diffuses through the horizontal separator pores to the negative plate as this is the only available path.



AGM Features –

- Specially-engineered safety relief valve system effectively **controls critical internal gas pressure**, preventing capacity loss from excessive gas seepage. This one-way valve also prevents outside air from entering the battery—a common cause of failure in most sealed valve-regulated battery designs.
- Fine microfiber **glass separators are highly porous** to hold electrolyte more efficiently and have extremely low electrical resistance for higher capacity.
- Power path grids are **computer-cast and pasted** to uniform thickness, allowing for the exact degree of compression needed for optimum oxygen flow between the plates and separators. (Plates compressed too tightly will impede oxygen flow, while plates packed too loosely allow valuable oxygen to escape to the top of the battery. Both conditions seriously impair performance and shorten battery life.)
- Exclusive **individual plate formation** provides the highest quality and most consistent performance.†

AGM Benefits –

- **Maintenance-free** construction eliminates the need to add water.
- **Completely sealed** valve-regulated design eliminates acid spills and terminal corrosion.
- **Safer operation** substantially minimizes chance of acid spray, fumes and explosion hazards when charged correctly.
- **Flexible design** can be installed in almost any position. (However, upside-down installation is not recommended.)
- **State-of-charge easily determined** by open circuit voltage.
- **Lower electrical resistance** provides higher discharge rates.
- **High freeze-resistance** offers longer battery life.
- **Resists vibration** damage for longer operating time.
- **Lightweight construction** for easy installation.
- **Requires less charging time** than conventional batteries.

"POWERED FOR PERFORMANCE"®

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ABSORBED GLASS MAT SERIES



ABSORBED GLASS MAT SERIES

GROUP NO.	PART NO.	FOOTNOTES	MINUTES DISCHARGED AT*					DISCHARGE AMPS PER 12-VOLT BATTERY TO 1.75 VPC @ 80°F (27°C)*							
			75 AMPS	50 AMPS	25 AMPS	15 AMPS	8 AMPS	5 AMPS	5 MINS.	10 MINS.	15 MINS.	20 MINS.	30 MINS.	60 MINS.	90 MINS.
STARTING OR DEEP-CYCLE - EV - TROLLING MOTOR - WHEELCHAIR															
U1	8AU1	2,38,39,Y	10	20	54	98	200	340	110	75	60	50	39	23	16
	8AU1H	2,17,38,39,Y	10	20	54	98	200	340	110	75	60	50	39	23	16
22NF	8A22NF	2,38,39,G	22	40	102	180	365	620	160	120	95	80	62	35.5	28
24	8A24	2,17,38,39,G	35	60	150	280	550	900	220	165	130	110	85	50.5	36
	8A24NH	2,38,39,G	35	60	150	280	550	900	220	165	130	110	85	50.5	36
27	8A27	2,17,38,39,G	43	75	185	330	640	1080	270	200	153	130	98	59	44
31	8A31DT	2,16,17,U	53	87.4	200	348	706	1265	305	226	174	147	114	68.2	49.0
4D	8A4D	2,17	106	180	413	745	1512	2507	508	408	318	266	200	115	85
8D	8A8D	2,17	138	230	517	953	1874	3040	600	475	386	325	256	151	106
GC2	8AGC2	2,G	94	171	409	718	1409	2304	—	—	—	—	—	—	—

GROUP NO.	PART NO.	VOLTS	AMPERE HOUR CAPACITY*					APPROX. WEIGHT LBS. (KGS.)	MAXIMUM OVERALL DIMENSIONS INCHES (MM)			STANDARD/OPTIONAL TERMINALS
			100 HR.	20 HR.	8 HR.	5 HR.	1 HR.		LENGTH	WIDTH	HEIGHT	
STARTING OR DEEP-CYCLE - EV - TROLLING MOTOR - WHEELCHAIR												
U1	8AU1	12	37.0	32.0	29.5	27.5	23.0	24.0 (10.9)	7 3/4 (197)	5 1/2 (130)	7 1/4 (184)	B
	8AU1H	12	37.0	32.0	29.5	27.5	23.0	24.0 (10.9)	8 5/8 (211)	5 1/2 (130)	7 1/4 (184)	
22NF	8A22NF	12	63.0	55.0	50.0	46.5	35.5	38.5 (17.5)	9 3/4 (238)	5 1/2 (140)	9 1/4 (235)	G U
24	8A24	12	91.0	79.0	72.0	69.2	50.5	53.0 (24.0)	10 1/2 (276)	6 1/4 (171)	9 1/4 (251)	
	8A24NH	12	91.0	79.0	72.0	69.2	50.5	53.0 (24.0)	10 1/2 (276)	6 1/4 (171)	9 1/4 (251)	
27	8A27	12	100.0	92.0	84.0	78.0	59.0	63.0 (28.6)	12 1/4 (324)	6 1/4 (171)	9 1/4 (251)	Y
31	8A31DT	12	110.0	105.0	90.0	86.0	68.2	69.0 (31.3)	12 5/8 (329)	6 1/4 (171)	9 1/4 (238)	
4D	8A4D	12	210.0	198.2	176.0	164.0	115.0	129.0 (58.5)	20 3/4 (527)	8 1/2 (216)	10 (254)	
8D	8A8D	12	250.0	245.0	212.0	197.0	151.1	158.0 (71.7)	20 3/4 (527)	11 (279)	10 (254)	
GC2	8AGC2	6	220.0	187.0	173.7	163.0	102.6	69.5 (32.0)	10 1/4 (260)	7 1/2 (181)	10 1/2 (276)	

FOOTNOTES:

- 2 - Black cover / Gray case
- 16 - Dual terminal universal design
- 17 - Includes handle
- 38 - "Non-Spillable" defined by DOT (Department of Transportation) definition
- 39 - "Non-Spillable" defined by ICAO (International Commercial Airline Organization) and IATA (International Airline Transportation Association) definitions
- B - Flag terminal w/ 3/8" diameter hole
- G - Offset post w/ horizontal hole, stainless steel 5/16" bolt & hex nut
- U - Molded-in offset SAE post and vertical 5/16" NEG, 3/8" POS, stainless steel studs & locking hex nuts
- Y - Small L terminals with round holes

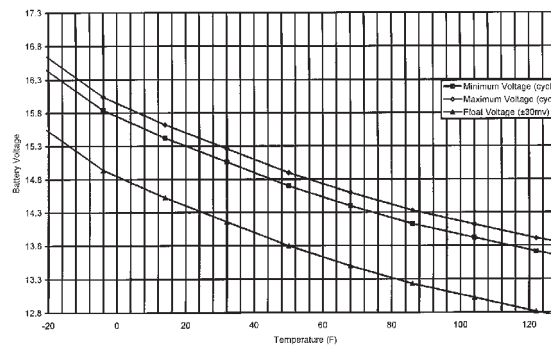
* Nominal

All batteries are manufactured in polypropylene cases.

† Excludes Group U1

Warranty void if opened or improperly charged. Caution: Constant under- or overcharging will damage any battery and shorten its life. Use a good constant potential, voltage-regulated charger. For 12-volt batteries, charge to at least 14.4 volts but no more than 14.6 volts at 68°F (20°C). For 6-volt batteries, charge to at least 7.2 volts but not more than 7.3 volts at 68°F (20°C). Do not charge in a sealed container. The AGM Series has more capacity at high discharge rates than conventional deep cycle batteries.

Constant Voltage vs. Temperature



Shown is the constant charging voltage in relation to the ambient temperature for cyclic and float use.

Potential Applications of AGM

Starting, Lighting and Ignition

- Cars • Trucks • Marine • Snowmobiles
- Lawn & Garden Tractors

Traction

- Wheelchairs • Floor Sweepers • Guided Vehicles
- Small Fork Lifts • Trolling Motors

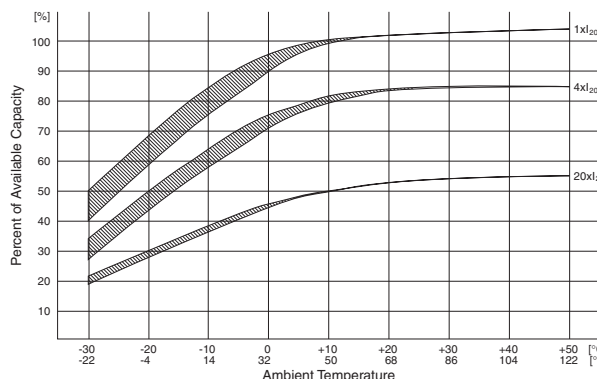
Industrial

- Cable TV • Emergency Lighting • Exit Lighting
- Alarm and Security Systems • PBX Systems • Utility Control
- Switching Equipment • Medical Equipment
- Recreational Vehicles • Electronic Cash Registers

Portable Devices

- Construction Equipment • Portable Pumps and Generators
- Portable Test and Measuring Equipment
- Portable Tools • Mobile TV, VCR, VTR

Capacity vs. Operating Temperature



Shown are the changes in capacity for a wider ambient temperature range, giving the available capacity as a percentage of the rated capacity at different ambient temperatures, for three different load examples, with uninterrupted discharge to the appropriate discharge cut-off voltage. The values for the upper edge of the curve were obtained from charging at an ambient temperature of +20°C (68°F) with a voltage limit of 2.3 V/cell. For the lower edge, charging was carried out at the specified ambient temperature. The curves show the behavior of the battery after a number of cycles.