

**NEW**

# Relay Gel™

Powered By Sonnenschein®

# RELAY GEL™



- Valve Regulated Lead Acid (VRLA) gel battery.
- Gel electrolyte design utilizing Sonnenschein® technology.
- Integrated removable carrying strap handles optional.
- Reinforced polypropylene case and cover – reducing battery wall deflection.
- Optional flame retardant polypropylene case and cover compliant with UL94 V-0.
- State of the art, second generation helium leak detection system confirms reliable post and jar-to-cover seals.
- Thick high-tin, low-calcium, silver positive plate design.
- Nominal float voltage 13.5 to 13.8 volts at 25°C.
- Manufactured in Columbus, Georgia.
- ISO 9001:2000 certified manufacturing facility.
- UL recognized component.
- Approved as non-spillable per regulations set forth by DOT, IMDG, IATA, and ICAO.
- Recyclable to world standards.



## SPECIFICATIONS

- Alloy:** Positive: Lead, Tin, Calcium and Silver  
Negative: Lead Calcium
- Terminals:** Threaded (M6) copper alloy, Flag, Marine, and SAE
- Container:** Reinforced polypropylene (standard)  
UL94 V-0 (optional)
- Safety Vent:** Low pressure, one-way, self-resealing safety vents



## Performance Specifications

Group Size	Battery DC Volts	Reserve Capacity (Min)	Capacity			Battery Dimensions			Weight* lbs.
			5 Hr Rate*	8 Hr Rate*	20 Hr Rate*	(inches)			
			Ahr (to 1.75 VPC @ 25°C)	Ahr (to 1.75 VPC @ 25°C)	Ahr (to 1.75 VPC @ 25°C)	Length	Width	Height	
U1	12	43	25	27	30	7.75	5.19	6.55	24
22NF	12	85	43	46	50	8.99	5.55	8.12	38
24	12	132	61	66	72	10.19	6.61	8.11	52
27	12	155	72	78	86	12.06	6.61	8.11	62
30H/31	12	196	85	91	104	13.00	6.61	8.81	72

\*Nominal ratings

**G N B**

INDUSTRIAL POWER



### Amperes @ 25°C (77°F)

	Model Number	Time															
		100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.75	R12VU1	0.34	1.28	1.51	2.36	2.78	3.05	3.38	3.80	4.36	5.13	6.24	8.01	10.99	19.05	32.26	50.19
Final	R12V22NF	0.54	2.14	2.52	4.00	4.72	5.19	5.77	6.47	7.37	8.59	10.34	13.16	18.44	32.88	53.77	82.76
VPC	R12V24	0.78	3.02	3.57	5.69	6.72	7.39	8.23	9.25	10.53	12.29	14.85	18.95	26.72	47.11	78.86	127.00
	R12V27	0.96	3.64	4.29	6.82	8.02	8.81	9.79	10.94	12.41	14.38	17.23	21.75	30.32	52.85	87.06	138.27
	R12V31	1.12	4.48	5.22	8.06	9.42	10.30	11.39	12.78	14.58	17.06	20.65	26.42	37.38	63.71	105.49	174.12

	Model Number	Time															
		100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.78	R12VU1	0.34	1.27	1.49	2.35	2.76	3.02	3.36	3.78	4.33	5.08	6.19	7.96	10.92	18.95	31.81	49.32
Final	R12V22NF	0.53	2.12	2.50	3.97	4.68	5.15	5.73	6.42	7.31	8.51	10.25	13.03	18.27	32.58	53.02	80.77
VPC	R12V24	0.77	3.00	3.54	5.65	6.67	7.35	8.17	9.17	10.44	12.18	14.70	18.75	26.41	46.50	77.43	122.91
	R12V27	0.96	3.61	4.26	6.76	7.97	8.76	9.73	10.86	12.32	14.27	17.10	21.61	30.11	52.44	85.73	135.20
	R12V31	1.11	4.43	5.17	8.01	9.36	10.24	11.33	12.70	14.50	16.95	20.52	26.25	37.15	63.06	103.96	169.53

	Model Number	Time															
		100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.80 Final VPC	R12VU1	0.33	1.27	1.49	2.33	2.74	3.00	3.33	3.75	4.30	5.04	6.14	7.90	10.84	18.80	31.38	48.11
	R12V22NF	0.53	2.10	2.48	3.93	4.64	5.11	5.68	6.36	7.24	8.43	10.15	12.90	18.09	32.22	52.26	78.44
	R12V24	0.77	2.98	3.52	5.61	6.63	7.30	8.12	9.09	10.35	12.08	14.58	18.60	26.21	45.99	76.00	118.81
	R12V27	0.96	3.60	4.24	6.73	7.93	8.72	9.68	10.82	12.26	14.21	17.03	21.48	29.91	51.83	84.50	131.92
	R12V31	1.10	4.39	5.14	7.96	9.30	10.18	11.26	12.62	14.40	16.84	20.38	26.07	36.88	62.46	101.91	163.59

	Model Number	Time															
		100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.81 Final VPC	R12VU1	0.33	1.26	1.47	2.31	2.71	2.98	3.30	3.71	4.25	4.99	6.08	7.82	10.71	18.54	30.83	47.18
	R12V22NF	0.53	2.08	2.46	3.90	4.60	5.05	5.62	6.28	7.14	8.32	10.02	12.71	17.79	31.65	51.31	76.00
	R12V24	0.76	2.96	3.50	5.58	6.59	7.25	8.07	9.03	10.28	11.99	14.48	18.45	25.98	45.47	74.77	115.33
	R12V27	0.95	3.58	4.21	6.68	7.87	8.65	9.61	10.71	12.14	14.08	16.87	21.31	29.62	51.21	83.17	128.03
	R12V31	1.10	4.35	5.11	7.91	9.24	10.11	11.18	12.54	14.30	16.72	20.23	25.87	36.60	61.89	100.78	159.16

	Model Number	Time															
		100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.83	R12VU1	0.33	1.24	1.46	2.28	2.68	2.94	3.26	3.67	4.20	4.93	6.00	7.72	10.57	18.23	30.18	45.40
Final	R12V22NF	0.52	2.06	2.43	3.86	4.55	5.00	5.55	6.21	7.06	8.21	9.88	12.54	17.54	31.14	50.12	73.35
VPC	R12V24	0.75	2.92	3.45	5.50	6.50	7.16	7.97	8.92	10.15	11.83	14.26	18.16	25.53	44.55	73.03	110.82
	R12V27	0.94	3.53	4.16	6.60	7.78	8.55	9.49	10.59	11.99	13.89	16.63	21.01	29.24	50.19	81.31	122.91
	R12V31	1.09	4.31	5.04	7.80	9.11	9.97	11.03	12.36	14.10	16.48	19.94	25.49	36.05	60.75	98.43	151.76



### Amperes @ 25°C (77°F)

Model Number	Time															
	100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.85 Final VPC R12VU1	0.32	1.23	1.44	2.25	2.64	2.90	3.21	3.61	4.14	4.86	5.89	7.58	10.37	17.77	29.19	43.72
R12V22NF	0.52	2.03	2.40	3.80	4.48	4.92	5.47	6.11	6.95	8.09	9.72	12.32	17.21	30.42	48.75	70.29
R12V24	0.74	2.88	3.40	5.43	6.41	7.06	7.86	8.80	10.01	11.66	14.05	17.87	25.08	43.63	71.29	107.13
R12V27	0.93	3.48	4.11	6.51	7.67	8.44	9.36	10.42	11.81	13.69	16.40	20.72	28.78	49.16	78.77	117.78
R12V31	1.07	4.26	4.97	7.69	8.99	9.83	10.87	12.18	13.90	16.24	19.64	25.11	35.49	59.62	95.74	144.92

Model Number	Time															
	100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.87 Final VPC R12VU1	0.32	1.19	1.40	2.19	2.56	2.81	3.12	3.50	4.01	4.70	5.70	7.32	10.03	17.10	27.96	41.31
R12V22NF	0.50	1.97	2.32	3.68	4.34	4.77	5.31	5.93	6.75	7.84	9.41	11.92	16.63	29.37	46.52	66.13
R12V24	0.73	2.80	3.31	5.27	6.23	6.85	7.63	8.55	9.73	11.33	13.64	17.36	24.32	41.99	68.01	101.62
R12V27	0.90	3.38	3.98	6.31	7.44	8.18	9.08	10.12	11.46	13.31	15.98	20.18	28.06	47.49	74.97	110.61
R12V31	1.05	4.15	4.84	7.48	8.74	9.56	10.56	11.84	13.50	15.76	19.06	24.35	34.39	58.02	92.58	138.27

Model Number	Time															
	100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.90 Final VPC R12VU1	0.30	1.14	1.34	2.09	2.44	2.68	2.97	3.33	3.81	4.47	5.43	6.97	9.55	16.18	26.39	38.11
R12V22NF	0.48	1.88	2.21	3.51	4.14	4.56	5.06	5.66	6.41	7.43	8.91	11.25	15.62	27.40	43.33	60.88
R12V24	0.69	2.67	3.16	5.05	5.97	6.58	7.33	8.21	9.35	10.89	13.13	16.69	23.40	40.12	64.53	96.28
R12V27	0.86	3.22	3.80	6.02	7.09	7.79	8.67	9.67	10.96	12.72	15.27	19.31	26.89	44.98	69.97	102.46
R12V31	1.00	3.98	4.64	7.16	8.36	9.14	10.10	11.31	12.89	15.05	18.18	23.21	32.73	55.55	88.06	128.03

Model Number	Time															
	100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.92 Final VPC R12VU1	0.29	1.08	1.27	1.98	2.32	2.54	2.82	3.17	3.63	4.25	5.17	6.63	9.01	15.26	24.77	35.30
R12V22NF	0.46	1.79	2.11	3.36	3.95	4.34	4.82	5.37	6.08	7.03	8.41	10.60	14.68	25.61	40.52	56.33
R12V24	0.66	2.54	3.00	4.80	5.67	6.24	6.93	7.76	8.83	10.29	12.41	15.79	22.19	37.85	60.84	90.13
R12V27	0.82	3.06	3.60	5.70	6.72	7.39	8.21	9.18	10.43	12.09	14.50	18.32	25.46	42.46	65.34	94.45
R12V31	0.95	3.79	4.42	6.81	7.94	8.68	9.59	10.74	12.23	14.27	17.23	21.98	30.96	51.73	81.48	117.78

Model Number	Time															
	100 hr	24 hr	20 hr	12 hr	10 hr	9 hr	8 hr	7 hr	6 hr	5 hr	4 hr	3 hr	2 hr	1 hr	0.5 hr	0.25 hr
1.94 Final VPC R12VU1	0.28	1.03	1.20	1.87	2.20	2.41	2.67	2.99	3.42	4.01	4.87	6.25	8.50	14.33	22.94	32.57
R12V22NF	0.43	1.68	1.99	3.16	3.74	4.11	4.57	5.08	5.74	6.64	7.92	9.96	13.74	23.83	37.86	52.23
R12V24	0.63	2.41	2.85	4.54	5.36	5.90	6.57	7.36	8.39	9.77	11.76	14.95	20.97	35.63	56.92	83.99
R12V27	0.77	2.90	3.42	5.42	6.38	7.01	7.80	8.71	9.90	11.47	13.73	17.32	24.02	39.53	60.02	85.01
R12V31	0.89	3.54	4.14	6.40	7.47	8.17	9.01	10.09	11.49	13.42	16.18	20.59	29.03	48.10	75.36	104.63

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