SCR200 Silicon Controlled Rectifier Chargers

TECHNICAL DATA

Application
The SCR200 Silicon Controlled Rectifier charger is conservatively rated to recharge discharged GNB® Industrial Power batteries, as defined by the GNB® Flooded Classic®, GNB® Flooded Classic Platinum™, Tubular-HP®, Tubular-LM™, or Element® installation and operating manuals, to its ampere-hour capacity within 8 hours.

Regulation
Line and load regulated. Finish rate voltage is held to within +/- 1% with line voltage variations of +/- 10%.

Warranty
Chargers have a 10-year limited warranty to the end-user. For the first 3 years, full warranty repair or replacement of defective parts (including labor) for all components is offered. During year 4, warranty is for parts only. Power transformers, SCR's, and silicon diodes are covered for a full 10 years. For more specific information, see Warranty Statement GB4000.

Provides High Efficiency
The proven I-E-I (constant current – constant voltage – constant current) profile is among the fastest and most reliable conventional recharges for your battery. By determining what your battery needs, the SCR200 provides electronic control over the charger output resulting in more efficient power usage.

Extends the Life of Your Battery
The constant voltage phase of recharging features a tightly controlled voltage during the critical gassing period. For Flooded Flat or Tubular batteries, this means less heat build-up and results in significantly less battery watering.

Superior Quality
Built to meet Battery Council International performance standards.

Rugged Case
Sturdy cabinet design allows stacking up to 3 units high.

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Advanced Charge Profiles
Prevent Under and Over Charging
SCR200 chargers use an I-E-I charge profile. The SCR200 charger programming allows it to charge either Flooded, Element® Valve Regulated, or Tubular-LM™ batteries.

By supplying precise electronic control during the high and low rate current stages, each charge cycle length is determined by battery voltage levels. This ensures your battery will receive the optimum charge regardless of input voltage fluctuations or variations in site conditions. Once the battery's voltage stabilizes, charging is terminated by timer or dV/dt (change in voltage over change in time), in order to protect against overcharging.

This GNB Industrial Power product is represented by:

Name Phone

Company

TECHNICAL DATA

SCR200 Chargers

offer you safe, simple, and reliable charging every time.

Features	Benefits
Adjustable Output Current	Enables you to match the exact battery size and charger requirements. More precise charging.
Low Voltage Override	Operator can manually override charger voltage limits for deeply discharged batteries.
Battery / Charger Mismatch Protection	Automatically reads for battery/charger voltage mismatches and won't start the recharge if the battery and charger voltage don't match. Prevents the possibility of using the wrong charger on your battery.
5-Second Delay	Delays recharge start 5 seconds after battery to charger connection is made. Guarantees safer connection by reducing possible danger to the operator.
Smart Start	Evaluates battery State Of Charge (SOC) and adjusts the charging profile to prevent overcharging. If the battery SOC is greater than 80%, the charger enters Auto Balance mode. If the SOC is between 70% and 80%, the charger operates until the finish rate current is reached, then enters Auto Balance mode.
Auto Balance	Slowly brings the battery up to full recharge with periodic charging, which minimizes heat generation and water loss.
Automatic Start / Stop	Requires only a simple battery to charger connection to begin recharge and automatically shuts off when recharge is complete. A user-friendly charger that protects against the risks associated with overcharging your battery.
LED Indicators and Display	Clearly displays your battery's charging status, battery voltage, charging current, elapsed time, and returned Ahr's. Prevents guesswork when charging status is required.
Delay Start	Charging can be programmed to begin within 48 hours (in one hour increments) after the battery to charger connection is made. Allows charging during off-peak hours - saving money on reduced electricity expenses. It also allows for battery warm up or cool down when required for certain applications.
Back-Up Timer	Shuts off the charger after 6.5 hours of operation at the high current rate, regardless of State Of Charge. Prevents unwanted continuous charging when the battery needs servicing. Protects battery from being over charged, prolonging battery life.
Manual Equalize	Operator can manually activate the equalize feature during battery charging cycle.
Auto Equalize	Charger can be programmed to automatically equalize the battery after a specified charging cycle count interval, from 0 to 255.
Refresh Charge with Disable	Refresh Charge gives the recharged and ready battery a 10-minute boost every 24 hours. Disable feature allows use with automated battery rotation systems.
Cool Down Period	Protects the battery by calculating, displaying, and counting down the minimum cool down period.
dV/dt Charge Termination	An automatic shutdown feature that monitors battery voltage and terminates the charge when no rise in voltage is detected. Helps prevent over and under charging, thus maximizing the life of your battery.
di/dt Charge Termination	An automatic shutdown feature that monitors for an increase in current during the constant voltage charging stage. Protects against thermal runaway and battery damage.
Adjustable Capacity Range	Should your battery requirements change in the future, the charger current output is adjustable from 50% to 100% of the charger's nominal Ahr rating in order to serve a wider selection of battery Ahr ratings. Eliminates the need to purchase another charger, thus resulting in a cost savings by using the same charger for future battery requirements.
Adjustable Gassing Voltage	Critical for cold storage and high temperature applications, which require a higher than nominal gassing voltage set point.
Voltage Drop Compensation	Extended charger cable lengths can be used after control board reprogramming.
AC Fail Recovery	After AC power is restored, the recharge resumes at the correct point in the charging cycle. Saves time, electricity, and unnecessary battery charging
Stackable Up To 3 High Without Additional Hardware	Provides flexibility in planning charging areas without the need to purchase expensive and often awkward hardware.

Charger Design

Serviceability:

All SCR200 charger models have been engineered to provide easy access to internal connections and components for ease of service, if ever required.

Thermal Management:

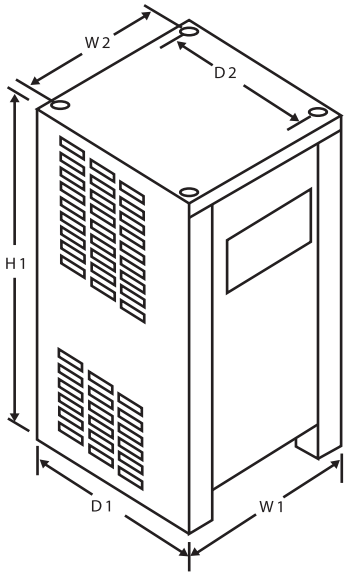
An efficient transformer design, ventilation louvers and reveal allow for maximum heat dissipation and longer operating life.

Quiet Operation:

The chargers produce less noise than standard ferroresonant chargers for a quieter working environment.

Independent Testing:

The chargers have been successfully tested by an authorized Underwriter's Laboratories testing facility to UL 1564 and CSA 107.2 standards.



CABINET TYPE	inches/mm					
	CABINET WIDTH (W1)	CABINET DEPTH (D1)	CABINET HEIGHT (H1)	MOUNTING HOLE WIDTH (W2)	MOUNTING HOLE DEPTH (D2)	MOUNTING HOLE DIAMETER
M4	19.69 500 mm	16.93 430 mm	26.65 678 mm	17.54 445 mm	12.99 330 mm	0.315 8.0 mm
M5	23.62 600 mm	20.87 530 mm	26.65 678 mm	21.48 546 mm	16.93 430 mm	0.315 8.0 mm
M6	23.62 600 mm	23.62 600 mm	42.01 1068 mm	21.48 546 mm	19.69 500 mm	0.315 8.0 mm

SINGLE PHASE SCR200 Model Numbers	Amp Hour	DC Volts	DC Amps	MAXIMUM AC AMPS (RMS) 120 VAC	208 VAC	240 VAC	480 VAC	600 VAC	SHIPPING DATA Cabinet Size	WEIGHT Lbs	KG
06-260S1	260	12	40	11.6	6.7	5.8	2.9	2.3	M4	79	36
06-475S1	475	12	75	21.0	12.5	10.8	5.4	4.3	M4	97	44
06-600S1	600	12	95	28.0	16.2	14.0	7.0	5.6	M4	101	46
06-865S1	865	12	135		22.6	19.6	9.8	7.8	M4	125	57
06-965S1	965	12	150		25.2	21.8	10.9	8.7	M4	154	70
09-475S1	475	18	75		16.9	14.6	7.3	5.8	M4	114	52
09-600S1	600	18	95		21.5	18.6	9.3	7.4	M4	119	54
09-865S1	865	18	135		30.5	26.4	13.2	10.6	M4	143	65
09-965S1	965	18	150		33.9	29.4	14.7	11.8	M4	178	80
12-260S1	260	24	40	19.7	11.3	9.8	4.9	4.0	M4	95	43
12-475S1	475	24	75		21.2	18.4	9.2	7.4	M4	134	61
12-600S1	600	24	95		27.0	23.4	11.7	9.4	M4	145	66
12-750S1	750	24	115		32.6	28.2	14.1	11.3	M4	163	74
12-865S1	865	24	135		38.3	33.2	16.6	13.3	M4	169	77
12-965S1	965	24	150		42.5	36.8	18.4	14.7	M4	198	90
18-260S1	260	36	40		16.0	13.8	6.9	5.5	M4	136	62
18-475S1	475	36	75		30.0	26.0	13.0	10.4	M4	158	72
18-600S1	600	36	95		37.9	32.9	16.4	13.1	M4	163	74
18-750S1	750	36	115		45.9	39.8	19.9	15.9	M5	216	98
18-865S1	865	36	135			46.6	23.3	18.7	M5	238	108
24-260S1	260	48	40		20.6	17.8	8.9	7.2	M5	132	60
24-475S1	475	48	75		38.6	33.4	16.7	13.4	M5	198	90
24-600S1	600	48	95		48.9	42.4	21.2	16.9	M5	242	110

THREE PHASE SCR200 Model Numbers	Amp Hour	DC Volts	DC Amps	MAXIMUM AC AMPS (RMS) 120 VAC	208 VAC	240 VAC	480 VAC	600 VAC	SHIPPING DATA Cabinet Size	WEIGHT Lbs	Kg
06-475T1	475	12	75		6.0	5.2	2.6	2.1	M4	101	46
06-600T1	600	12	95		7.6	6.6	3.3	2.6	M4	101	46
06-750T1	750	12	115		9.2	8.0	4.0	3.2	M4	123	56
06-865T1	865	12	135		10.9	9.4	4.7	3.8	M4	132	60
06-965T1	965	12	150		12.9	11.2	5.6	4.5	M4	143	65
06-1050T1	1050	12	165		13.8	12.0	6.0	4.8	M4	163	74
06-1200T1	1200	12	185		15.0	13.0	6.5	5.2	M5	246	112
06-1450T1	1450	12	225		18.2	15.8	7.9	6.3	M5	299	136
12-475T1	475	24	75		11.5	10.0	5.0	4.0	M4	134	61
12-600T1	600	24	95		14.5	12.6	6.3	5.0	M4	145	66
12-750T1	750	24	115		17.6	16.2	7.6	6.1	M4	145	66
12-865T1	865	24	135		20.6	17.8	8.9	7.1	M4	180	82
12-965T1	965	24	150		22.6	19.6	9.8	7.8	M5	238	108
12-1050T1	1050	24	165		24.9	21.6	10.8	8.6	M5	238	108
12-1200T1	1200	24	185		27.9	24.2	12.1	9.7	M5	288	131
12-1450T1	1450	24	225		33.9	29.4	14.7	11.8	M5	365	166
18-260T1	260	36	40		8.5	7.4	3.7	2.9	M4	158	72
18-475T1	475	36	75		15.9	13.8	6.9	5.5	M4	180	82
18-600T1	600	36	95		20.3	17.6	8.8	7.0	M4	180	82
18-750T1	750	36	115		23.3	20.6	10.6	8.5	M4	209	95
18-865T1	865	36	135		28.9	25.0	12.5	10.0	M5	275	125
18-965T1	965	36	150		32.1	27.8	13.9	11.1	M5	275	125
8-1050T1	1050	36	165		35.3	30.6	15.3	12.2	M5	297	135
8-1200T1	1200	36	185		39.5	34.2	17.1	13.7	M5	321	146
18-1450T1	1450	36	225		48.0	40.6	20.8	16.6	M5	398	180
18-1700T1	1700	36	265			45.6	24.5	19.6	M6	466	212
24-475T1	475	48	75		21.0	18.2	9.1	7.3	M5	242	110
24-600T1	600	48	95		26.8	23.4	11.6	9.3	M5	264	120
24-750T1	750	48	115		32.3	27.0	14.0	13.0	M5	288	130
24-865T1	865	48	135		37.9	31.5	16.4	15.0	M5	299	136
24-965T1	965	48	150		42.0	34.8	18.2	17.0	M5	304	138
24-1050T1	1050	48	165		46.2	40.0	20.0	18.0	M5	326	148
24-1200T1	1200	48	185			44.6	22.3	17.8	M5	363	165
24-1450T1	1450	48	225				27.1	25.0	M5	464	211
36-475T1	475	72	75		31.6	27.4	13.7	11.0	M5	330	150
36-750T1	750	72	115		48.5	42.0	21.0	16.8	M5	352	160
36-865T1	865	72	135			49.0	24.6	19.7	M5	374	170
36-965T1	965	72	150				27.3	21.8	M5	396	180

Model Numbers:

SCR200-AA-BBBBC1X		
Where	AA	= Number of Battery Cells
	BBBB	= Maximum Battery Ampere-Hours
	C	= S (single) or T (triple) Phase Input Power
	X	= H for 208/240/480 VAC = L for 120/208/240 VAC = C for 600 VAC

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

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