Project _____

Item # _____

Quantity _____

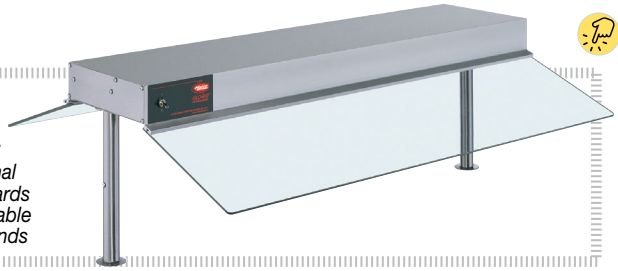
Glo-Ray® Infrared Strip Heaters with Lights

Models:

GRAL -18, -24, -30, -36, -42, -48, -54, -60, -66, -72, -84, -96, -108, -120, -132, -144

GRAHL-18, -24, -30, -36, -42, -48, -54, -60, -66, -72, -84, -96, -108, -120, -132, -144

Keep food hot and fresh and hold optimum serving temperatures longer. Extruded aluminum housings go up to 144" (3658 mm) in length and have lights to illuminate your food holding area. Heavy-duty stainless steel housings are available for marine applications.



GRAHL-36 with optional sneeze guards and adjustable tubular stands

Standard features

- Provides even heat distribution – no "cold spots"
- Pre-focused heat maintains safe serving temperatures longer
- Standard and High Watt available
- Sturdy extruded aluminum housings that do not sag, from 18" to 144" (457 to 3658 mm)
- Metal sheathed heating element part guaranteed against burnout and breakage for two years
- Reflector does not blacken, maintaining a consistent heat pattern
- Reinforced wire guard provides operator safety without affecting heat distribution
- Coated shatter-resistant incandescent lights enhance brilliant product display while safeguarding food from bulb breakage
- 60 watt teflon coated bulbs (1 per foot), Halogen bulbs available
- Extra lights available – two per foot, minus one (GRAHL-48 with extra lights will have seven bulbs)
- Optional sneeze guard made of shatterproof, easy-to-clean acrylic provide safe food serving environment
- Additional reflector styles and lower wattage elements also available, please consult factory for more information

Options (available at time of purchase only)

Housing in *Designer* Color or Gloss Finish – Clear Anodized Standard⊗
☐Warm Red ☐Black ☐Gray Granite ☐White Granite
☐Navy Blue ☐Hunter Green ☐Antique Copper ☐Radiant Red
☐Glossy Gray ☐Bold Black ☐Gleaming Gold ☐Brilliant Blue

☐Indicator Light

☐Tandem Elements – Maximum of two elements end-to-end (wattage will change based on configuration)

Power Leads – Extended beyond Standard 3' (914 mm) Conduit (specify lead length)
☐1'-5' (305-1525 mm) ☐6'-10' (1829-3048 mm)
☐11'-15' (3352-4572 mm) ☐16'-20' (4877-6096 mm)

Sneeze Guard
☐9.375" (238 mm) – One Side ☐9.375" (238 mm) – Two Sides
☐14" (356 mm) – One Side ☐14" (356 mm) – Two Sides

Bulbs
☐No Bulbs (GRAL 120V models only)
☐Halogen Bulb in lieu of Standard Display Light (40 watt), 120V only

☐Extra Lamps – Installed (max. two per 12" (305 mm) less one) – one per 12" (305 mm) is standard

☐Bright Annealed Reflector for Lights

Infinite Control in lieu of Toggle – Remote Enclosure Recommended
Consult factory if rating of element exceeds 12.2 amps – Choose below:
☐Built-in (max. of 12.2 amps) (remote installation recommended)
☐Remote Infinite Switches (max. 12.2 amps)

☐Remote Toggle Switches (max. 15 amps)

☐Remote Box – Aluminum finish Standard
Optional *Designer* Color or Gloss Finish⊗
☐Warm Red ☐Black ☐Gray Granite ☐White Granite
☐Navy Blue ☐Hunter Green ☐Antique Copper ☐Radiant Red
☐Glossy Gray ☐Bold Black ☐Gleaming Gold ☐Brilliant Blue

☐Adjustable Tubular Stands 10"-14" (254-356 mm) (Aluminum finish only)

Non-Adjustable Tubular Stands – Specify length (matches housing color)
☐10" (254 mm) ☐12" (305 mm) ☐14" (356 mm) ☐16" (406 mm)

C-Leg Stands – For models up to 6' (1829 mm) – Choose wattage and clearance
☐Standard Watt –10" (254 mm) ☐High Watt –13.5" (343 mm)

T-Leg Stands – For models up to 6' (1829 mm) – Choose clearance
☐10" (254 mm) (standard Watt) ☐13.5" (343 mm)
☐16" (406 mm) ☐18" (457 mm)

Attached 6' (1829 mm) Cord and Plug Set – Choose below
☐ 120V models up to 72" (1829 mm) – Requires Standard Chain Mount Kit or add optional C-leg Stands, or T-leg Stands
☐ Export models up to 96" (2438 mm)

☐Two S hooks with two 6" (153 mm) lengths of chain

Accessories

Adjustable Angle Brackets (with clearance above unit)
☐1"-2" (25-51 mm) ☐7" (178 mm) – GRAL models only

☐Chain Suspension

Chef LED Light Bulb – Bulbs must be rotated down – GRAHL models require pass-through usage only and unit must be 10" (254 mm) or higher from surface
120V ☐ 3000K Warm halogen ☐ 4000K Cool fluorescent
230V – CE for input voltages above 200V
☐ 3000K Warm halogen ☐ 4000K Cool fluorescent

⊗ Non-standard colors are non-returnable

NOTE: Install Remote Box outside Heat Zone or damage will occur.

For operation, location and safety information, please refer to the Installation and Operating Manual.

MADE IN THE USA

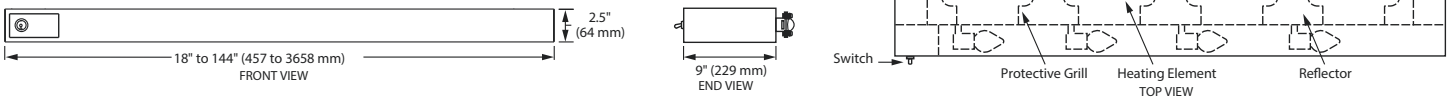
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Glo-Ray® Infrared Aluminum Strip Heaters with Lights

Models: GRAL-18, -24, -30, -36, -42, -48, -54, -60, -66, -72, -84, -96, -108, -120, -132, -144
GRAHL-18, -24, -30, -36, -42, -48, -54, -60, -66, -72, -84, -96, -108, -120, -132, -144

GRAL and GRAHL



SPECIFICATIONS -Glo-Ray® Infrared Aluminum Strip Heaters with Lights

Phase: All Single Phase (3-wire)
Amps: Amps on all models vary based on configuration – please consult factory.

The shaded areas contain electrical information for International models

Standard Watt					High Watt					Both Models		
Model	Volts	Watt	Amp	Approx. Ship Weight●	Model	Volts	Watt	Amp	Approx. Ship Weight●	Number of Bulbs	Width x Depth x Height	Optional Plug
GRAL-18	120	370	3.1	9 lbs. (4 kg.)	GRAHL-18	120	470	3.9	8 lbs. (4 kg.)	2	18" x 9" x 2.5" (457 x 229 x 64 mm)	NEMA 5-15P
	120/208		2.2			120/208		2.7				–
	120/240		2.0			120/240		2.5				
	–	–	–			100	433	4.3				–
	200	314	1.6			200	407	2.0				
	220-230 (CE)‡	350-383	1.6-1.7			220-230 (CE)‡	450-492	2.0-2.1				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	340-370	1.5-1.5			230-240 (CE)‡	432-470	1.9-2.0				
GRAL-24	120	470	3.9	10 lbs. (5 kg.)	GRAHL-24	120	620	5.2	10 lbs. (5 kg.)	2	24" x 9" x 2.5" (610 x 229 x 64 mm)	NEMA 5-15P
	120/208		2.7			120/208		3.4				–
	120/240		2.5			120/240		3.1				
	–	–	–			100	583	5.8				–
	200	407	2.0			200	546	2.7				
	220-230 (CE)‡	450-492	2.0-2.1			220-230 (CE)‡	600-656	2.7-2.9				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	432-470	1.9-2.0			230-240 (CE)‡	569-620	2.5-2.6				
GRAL-30	120	570	4.8	12 lbs. (6 kg.)	GRAHL-30	120	780	6.5	11 lbs. (5 kg.)	2	30" x 9" x 2.5" (762 x 229 x 64 mm)	NEMA 5-15P
	120/208		3.2			120/208		4.2				–
	120/240		2.9			120/240		3.8				
	–	–	–			100	743	7.4				–
	200	499	2.5			200	694	3.5				
	220-230 (CE)‡	550-601	2.5-2.6			220-230 (CE)‡	760-831	3.5-3.6				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	523-570	2.3-2.4			230-240 (CE)‡	716-780	3.1-3.3				
GRAL-36	120	755	6.3	13 lbs. (6 kg.)	GRAHL-36	120	980	8.2	13 lbs. (6 kg.)	3	36" x 9" x 2.5" (914 x 229 x 64 mm)	NEMA 5-15P
	120/208		4.3			120/208		5.3				–
	120/240		3.9			120/240		4.8				
	–	–	–			100	925	9.3				–
	200	657	3.3			200	864	4.3				
	220-230 (CE)‡	725-792	3.3-3.4			220-230 (CE)‡	950-1038	4.3-4.5				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	693-755	3.0-3.1			230-240 (CE)‡	900-980	3.9-4.1				
GRAL-42	120	855	7.1	15 lbs. (7 kg.)	GRAHL-42	120	1130	9.4	16 lbs. (8 kg.)	3	42" x 9" x 2.5" (1067 x 229 x 64 mm)	NEMA 5-15P
	120/208		4.7			120/208		6.1				–
	120/240		4.3			120/240		5.5				
	–	–	–			100	1075	10.6				–
	200	749	4.3			200	1003	5.0				
	220-230 (CE)‡	825-902	3.8-3.9			220-230 (CE)‡	1100-1202	5.0-5.2				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	785-855	3.4-3.6			230-240 (CE)‡	1038-1130	4.5-4.7				
GRAL-48	120	1040	8.7	17 lbs. (8 kg.)	GRAHL-48	120	1340	11.2	17 lbs. (8 kg.)	4	48" x 9" x 2.5" (1219 x 229 x 64 mm)	NEMA 5-15P
	120/208		5.8			120/208		7.3				–
	120/240		5.3			120/240		6.6				
	–	–	–			100	1267	12.7				–
	200	906	4.5			200	1184	5.9				
	220-230 (CE)‡	1000-1093	4.6-4.8			220-230 (CE)‡	1300-1421	5.9-6.2				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	955-1040	4.2-4.3			230-240 (CE)‡	1231-1340	5.4-5.6				
GRAL-54	120	1165	9.7	19 lbs. (9 kg.)	GRAHL-54♣	120	1490	12.4	19 lbs. (9 kg.)	4	54" x 9" x 2.5" (1372 x 229 x 64 mm)	NEMA 5-15P
	120/208		6.4			120/208		8.0				–
	120/240		5.9			120/240		7.2				
	–	–	–			100	1417	14.2				–
	200	1022	5.1			200	1322	6.6				
	220-230 (CE)‡	1125-1230	5.1-5.3			220-230 (CE)‡	1450-1585	6.6-6.9				CEE 7-7 Schuko BS-1363
	230-240 (CE)‡	1070-1165	4.7-4.9			230-240 (CE)‡	1368-1490	5.9-6.2				

● Shipping weight includes packaging, does not include RMB.
‡ CE approved units for 220–230V utilize a 220V heating system; 230–240V CE units utilize a 240V heating system.
♣ Require a NEMA 5-20P cord for Canada.

NOTE: GRAL and GRAHL models that have multiple voltages listed, such as 120/208 or 120/240 have multiple circuits. For example, a 120/208V unit utilizes 120V for the light circuit and 208V for the heat circuit(s). Consult the electrical diagram supplied with the unit for specific information.

CAUTION: Strip heaters equipped with incandescent lights that require a circuit breaker larger than 20 amps for the heat element must have a separate circuit breaker for the incandescent lights that is 20 amps or less.

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Glo-Ray® Infrared Aluminum Strip Heaters with Lights

Models: GRAL-18, -24, -30, -36, -42, -48, -54, -60, -66, -72, -84, -96, -108, -120, -132, -144
GRAHL-18, -24, -30, -36, -42, -48, -54, -60, -66, -72, -84, -96, -108, -120, -132, -144

SPECIFICATIONS -Glo-Ray® Infrared Aluminum Strip Heaters with Lights

Phase: All Single Phase (3-wire)
Amps: Amps on all models vary based on configuration – please consult factory.

The shaded areas contain electrical information for International models

Standard Watt					High Watt					Both Models		
Model	Volts	Watt	Amps	Approx. Ship Weight[a]	Model	Volts	Watt	Amps	Approx. Ship Weight[a]	Number of Bulbs	Width x Depth x Height	Optional Plug
GRAL-60	120	1350	11.3	21 lbs. (10 kg.)	GRAHL-60[b]	120	1700	14.2	21 lbs. (10 kg.)	5	60" x 9" x 2.5" (1524 x 229 x 64 mm)	NEMA 5-15P
	120/208		7.5			120/208		9.2				–
	120/240		6.9			120/240		8.3				
	–	–	–			100	1608	16.1				–
	200	1179	5.9			200	1503	7.5				
	220-230 (CE)[‡]	1300-1421	5.9-6.2			220-230 (CE)[‡]	1650-1803	7.5-7.8				CEE 7-7 Schuko BS-1363
	230-240 (CE)[‡]	1240-1350	5.4-5.6			230-240 (CE)[‡]	1561-1700	6.8-7.1				
GRAL-66[b]	120	1460	12.2	22 lbs. (10 kg.)	GRAHL-66[c][d][e]	120	1860	15.5	22 lbs. (10 kg.)	5	66" x 9" x 2.5" (1676 x 229 x 64 mm)	NEMA 5-15P
	120/208		8.1			120/208		10.0				–
	120/240		7.3			120/240		9.0				
	–	–	–			100	1768	17.7				–
	200	1281	6.4			200	1651	8.3				
	220-230 (CE)[‡]	1410-1541	6.4-6.7			220-230 (CE)[‡]	1810-1978	8.2-8.6				CEE 7-7 Schuko BS-1363
	230-240 (CE)[‡]	1341-1460	5.8-6.1			230-240 (CE)[‡]	1708-1860	7.4-7.8				
GRAL-72[b]	120	1635	13.6	24 lbs. (11 kg.)	GRAHL-72[c][d][e]	120	2085	17.4	34 lbs. (16 kg.)	6	72" x 9" x 2.5" (1829 x 229 x 64 mm)	NEMA 5-15P
	120/208		9.1			120/208		11.3				–
	120/240		8.3			120/240		10.2				
	–	–	–			100	1975	19.8				–
	200	1429	7.4			200	1845	9.2				
	220-230 (CE)[‡]	1575-1722	7.2-7.5			220-230 (CE)[‡]	2025-2213	9.2-9.6				CEE 7-7 Schuko BS-1363
	230-240 (CE)[‡]	1502-1635	6.5-6.8			230-240 (CE)[‡]	1915-2085	8.3-8.7				
GRAL-84[c][d]	120	1920	16.0	28 lbs. (13 kg.)	GRAHL-84[c][d][f]	120	2470	20.6	28 lbs. (13 kg.)	7	84" x 9" x 2.5" (2134 x 229 x 64 mm)	–
	120/208		10.7			120/208		13.4				
	120/240		9.8			120/240		12.0				
	–	–	–			100	2342	23.4				NEMA 5-15P
	200	1679	8.4			200	2187	10.9				
	220-230 (CE)[‡]	1850-2022	8.4-8.8			220-230 (CE)[‡]	2400-2623	8.2-8.6				CEE 7-7 Schuko BS-1363
	230-240 (CE)[‡]	1763-1920	7.7-8.0			230-240 (CE)[‡]	2268-2470	9.9-10.3				
GRAL-96[c][d]	120	2205	18.4	32 lbs. (15 kg.)	GRAHL-96[f][g]	120	2880	24.0	53 lbs. (24 kg.)	8	96" x 9" x 2.5" (2438 x 229 x 64 mm)	–
	120/208		12.3			120/208		15.5				
	120/240		11.2			120/240		14.0				
	–	–	–			100	2733	27.3				NEMA 5-15P
	200	1928	9.64			200	2552	12.8				
	220-230 (CE)[‡]	2125-2323	9.7-10.1			220-230 (CE)[‡]	2800-3060	12.7-13.3				CEE 7-7 Schuko BS-1363
	230-240 (CE)[‡]	2025-2205	8.8-9.2			230-240 (CE)[‡]	2645-2880	11.5-12.0				
GRAL-108[f][g]	120	2390	19.9	36 lbs. (17 kg.)	GRAHL-108[f][g]	120	3040	25.3	45 lbs. (21 kg.)	9	108" x 9" x 2.5" (2743 x 229 x 64 mm)	–
	120/208		13.4			120/208		16.5				
	120/240		12.2			120/240		14.9				
	220-230	2304-2518	10.5-10.9			220-230	2954-3228	13.4-14.0				
	230-240	2195-2390	9.5-10.0			230-240	2792-3040	12.1-12.7				
GRAL-120[f][g]	120	2700	22.5	40 lbs. (19 kg.)	GRAHL-120[f][g]	120	3400	28.3	40 lbs. (19 kg.)	10	120" x 9" x 2.5" (3048 x 229 x 64 mm)	–
	120/208		15.1			120/208		18.5				
	120/240		13.8			120/240		16.7				
	220-230	2604-2846	11.8-12.4			220-230	3304-3611	15.0-15.7				
	230-240	2480-2700	10.8-11.3			230-240	3123-3400	13.6-14.2				
GRAL-132[f][g]	120	2980	24.8	44 lbs. (20 kg.)	GRAHL-132[f][g]	120	3780	31.5	44 lbs. (20 kg.)	11	132" x 9" x 2.5" (3353 x 229 x 64 mm)	–
	120/208		16.7			120/208		20.5				
	120/240		15.2			120/240		18.5				
	220-230	2875-3142	13.1-13.7			220-230	3675-4016	16.7-17.5				
	230-240	2737-2980	11.9-12.4			230-240	3472-3780	15.1-15.6				
GRAL-144[f][g]	120	3270	27.3	48 lbs. (22 kg.)	GRAHL-144[f][g]	120	4170	34.8	48 lbs. (22 kg.)	12	144" x 9" x 2.5" (3658 x 229 x 64 mm)	–
	120/208		18.3			120/208		22.6				
	120/240		16.6			120/240		20.4				
	220-230	3155-3448	14.3-15.0			220-230	4055-4432	18.4-19.3				
	230-240	3003-3270	13.1-13.6			230-240	3830-4170	16.7-17.4				

[a] Shipping weight includes packaging, does not include RMB.
[b] Require a NEMA 5-20P cord for Canada.
[c] 100 and 120V models with infinite switch require tandem (end-to-end) elements, consult factory for applications.
[d] 100V and 120V models may require additional switches, consult factory for applications.
[e] Glo-Ray models 108"-144" (2743-3658 mm), 100V and 120V models of GRAHL-84, -96 contain tandem (end-to-end) elements that may be individually controlled.
[f] GRAHL-66 and GRAHL-72 require NEMA 5-20P cord (not available for Canada).

NOTE: GRAL and GRAHL models that have multiple voltages listed, such as 120/208 or 120/240 have multiple circuits. For example, a 120/208V unit utilizes 120V for the light circuit and 208V for the heat circuit(s). Consult the electrical diagram supplied with the unit for specific information.

CAUTION: Strip heaters equipped with incandescent lights that require a circuit breaker larger than 20 amps for the heat element must have a separate circuit breaker for the incandescent lights that is 20 amps or less.

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TOGGLE SWITCH - Amps: Max.15 amps. Location: Chef's left side – light side
INFINITE SWITCH - Max. 12.2 amps
CONDUIT/LEADS - 3' (914 mm) conduit standard on 120V, 120/208V and 120/240V models only. **US/Canada:** 3' (914 mm) conduit with leads, server's right
Euro/UK: 6" (152 mm) pigtail leads– server's right.

MINIMUM RECOMMENDED MOUNTING HEIGHTS

(Refer to the Installation section of the Manual on the Hatco website)
Standard Watt: 8"-11" (203-279 mm) **High Watt:** 11"-14" (279-356 mm)

Combustibles
Unit to surface below: Standard watt - 10" (254 mm), High watt13.5" (343 mm)
Back to wall: 3" (76 mm) clearance
Below overshelf:1" (25 mm) clearance

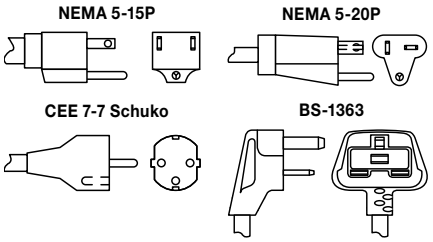
Non-Combustibles
Corded Units with Built-In Switches:
Unit to surface below: Standard watt: 10" (254 mm), High watt: 11" (279 mm)
Must be installed in a pass through area - no back wall instillation
Below overshelf: 3" (76 mm) clearance

Hardwired with Built-In Switches:
Unit to surface below:
Standard watt: 8" (203 mm)
High watt with infinite control or indicator light:10" (254 mm)
High watt with On/Off toggle switch: 8" (203 mm)
Must be installed in a pass through area - no back wall instillation
Below overshelf: 1" (25 mm) clearance

Hardwired Units with Remote Switches:
Unit to surface below: 8" (203 mm)
Back to wall: 0" (0 mm) clearance
Below overshelf:0" (0 mm) clearance
Setback from the front of an overshelf: Maximum 10" (254 mm)

PLUG CONFIGURATIONS – Optional

Please refer to electrical specifications shown in charts.



REMOTE CONTROL ENCLOSURES

Must order an RMB. One Control Box per Strip Heater - If RMB2 is used, multiple warmers can be controlled from one box.
Click here to go to the Choose Remote Box Configurator (RMB Picker)
or follow this file path: www.hatcocorp.com > Resources > Choose Remote Box

Model	Width	Toggle Switches
RMB-3	5.5"(140 mm)	2 Maximum
RMB-7	9" (229 mm)	4 Maximum
RMB-14	14" (356 mm)	6 Maximum
RMB-16	16" (406 mm)	3 Maximum
RMB-20	20" (508 mm)	3 Maximum
Model	**Width**	**Description**
RMB2-1R	11" (279 mm)	1 toggle, 1 infinite, 1 relay, 1 indicator light
RMB2-2R	14" (356 mm)	1 toggle, 1 infinite, 2 relays, 1 indicator light

PRODUCT SPECS

Infrared Foodwarmers with Lights

The Infrared Foodwarmer shall be a Glo-Ray®, manufactured by the Hatco Corporation, Milwaukee, WI 53234 U.S.A. The Foodwarmer shall be a Glo-Ray Model ... , rated at ... watts, ... volts, single phase, and be ... inches (millimeters) in overall width. The Glo-Ray shall consist of an aluminum housing and include as standard equipment four stainless steel shelf mounting tabs, incandescent lights, and an on-off switch may be optionally installed to either the front or rear of the unit. The infrared heating element shall be tubular metal sheathed. The foodwarmer shall be factory-assembled ready for electrical installation. Options and accessories shall include adjustable or non-adjustable tubular stand, C-leg stand, T-leg stand, wall brackets, angle brackets, suspension chain and fittings, Chef LED bulb, sneeze guard, cord and plug set, indicator light, and infinite control - remote or built-in.

Warranty consists of 24/7 parts and service assistance (U.S. and Canada only).