

# STEAM, AIR & GAS APPLICATIONS TO 750°F<sup>1</sup>

## GCHI/GCHIB Series

Starts at  
**\$1501**

- ✓ 3 to 18" ANSI Blind Flange Design
- ✓ 3 to 18" Carbon Steel Pipe Body, 150 Lb Construction (750°F Max Vessel and 1600°F Max Sheath Temp.)<sup>1</sup> For Stainless Steel Pipe Body Construction, Refer to GCHIS Series Circulation Heaters
- ✓ 3 to 350 kW
- ✓ 240 and 480V, 1 & 3 Phase
- ✓ General Purpose, Moisture Resistant/Explosion Resistant or Moisture Resistant Terminal Enclosure
- ✓ 0.475" Dia. INCOLOY® Sheath Elements (15 to 23 W/in<sup>2</sup>)
- ✓ 3 and 5" with Side Mounted Thermostat (200 to 550°F), 8, 10, 14 and 16" without Thermostat
- ✓ CSA and Other Third Party Approval, Listing or Certification Available

### APPLICATIONS

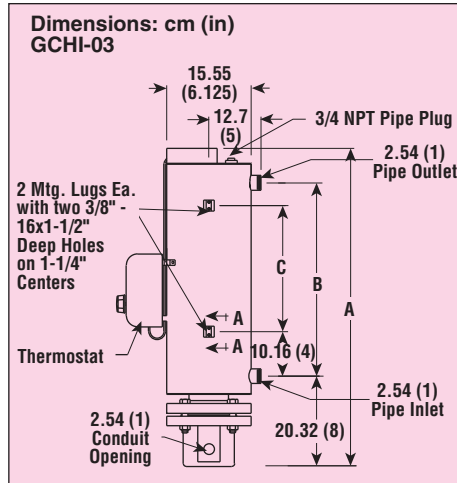
**Steam, Air and Gas:** Higher kW ratings for larger industrial and commercial gas heating applications.

### FEATURES

**Terminal Enclosure:** E1 General Purpose is standard. E2 Moisture Resistant/Explosion Resistant, E3 Explosion Resistant or E4 Moisture Resistant available.

**Elements:** 0.475" diameter INCOLOY sheath elements.

**Flange:** 3 -10" ANSI B-16.5 flange with ½" thermowell for thermostat bulb and a ¼ NPT threaded opening for a thermocouple or RTD.



**Vessel:** Pipe body and nozzles are ASTM A53B carbon steel pipe. The end disk is ASTM A516 Grade 70 carbon steel plate. Provided with thermal insulation and painted sheet metal jacket.

**Baffle Assembly:** Internal baffle assemblies are provided on GCHIB-18 models. Baffles reduce the internal cross sectional area thereby increasing the velocity of the gas. Increasing the gas velocity reduces the operating temperature of the elements and the shell of the vessel.

**Wiring:** Convenient field wiring terminals are provided for easy installation.



**Controls:** Series 03 and 06 stock and assembly stock heaters come equipped with side mounted thermostat. Series 18, 27, 45 and 108 are furnished without thermostat.

**MOST POPULAR MODELS HIGHLIGHTED!**

| To Order (Specify Model Number)  |       |             |                                  |     |     |                        |        |            |
|--|-------|-------------|----------------------------------|-----|-----|------------------------|--------|------------|
| kW   | Volts | Ckt & Phase | Dimensions (In.)                 |     |     | Model No.              | Price  | Wt. (Lbs.) |
|  |       |             | A                                | B   | C   |                        |        |            |
| <b>Series 03 — 3 inch, 150 lb carbon steel vessel — 3 INCOLOY elements<sup>1</sup> (23 W/in<sup>2</sup>) with thermostat</b> |       |             |                                  |     |     |                        |        |            |
| 3  | 240   | 1-1         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-003P-E1/240    | \$1501 | 62         |
| 3  | 240   | 1-3         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-003P-E1/240/3P | 1501   | 62         |
| 3  | 480   | 1-1         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-003P-E1/480    | 1501   | 62         |
| 3  | 480   | 1-3         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-003P-E1/480/3P | 1501   | 62         |
| 4.5  | 240   | 1-1         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-04P5-E1/240    | 1742   | 72         |
| 4.5  | 240   | 1-3         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-04P5-E1/240/3P | 1742   | 72         |
| 4.5  | 480   | 1-1         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-04P5-E1/480    | 1742   | 72         |
| 4.5  | 480   | 1-3         | 32 <sup>15</sup> / <sub>16</sub> | 22½ | 16½ | GCHI-03-04P5-E1/480/3P | 1742   | 72         |
| 6  | 240   | 1-1         | 42 <sup>15</sup> / <sub>16</sub> | 32½ | 26½ | GCHI-03-006P-E1/240    | 2121   | 94         |
| 6  | 240   | 1-3         | 42 <sup>15</sup> / <sub>16</sub> | 32½ | 26½ | GCHI-03-006P-E1/240/3P | 2121   | 94         |
| 6  | 480   | 1-1         | 42 <sup>15</sup> / <sub>16</sub> | 32½ | 26½ | GCHI-03-006P-E1/480    | 2121   | 94         |
| 6  | 480   | 1-3         | 42 <sup>15</sup> / <sub>16</sub> | 32½ | 26½ | GCHI-03-006P-E1/480/3P | 2121   | 94         |

**Ordering Examples:** GCHI-03-04P5-E1/480/3P 4.5 kW, 3 Phase, 480 Vac Heater, \$1742.  
GCHI-03-003P-E1/240/3P, 3 kW, 3 Phase, 240 Vac Heater, \$1501.

<sup>1</sup> Outlet gas temperature must be kept below both maximum sheath and vessel temperature or element and heater damage may occur.



# STEAM, AIR & GAS APPLICATIONS TO 750°F<sup>1</sup> GCHI/GCHIB Series

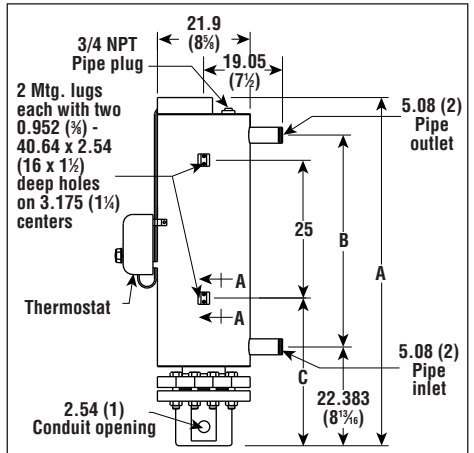
**MOST POPULAR MODELS HIGHLIGHTED!**

## To Order (Specify Model Number)

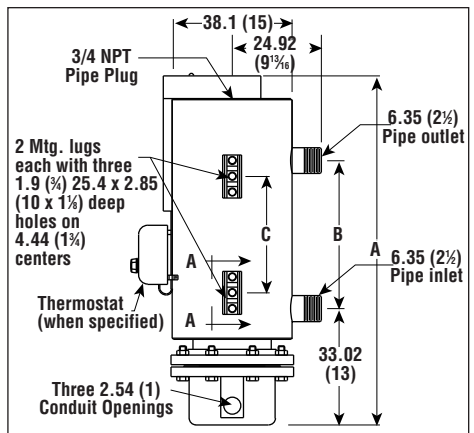
| kW   | Volts | Ckt & Phase | Dimensions (In.)   |                   |                   | Model No.              | Price  | Wt. (Lbs.) |
|--|-------|-------------|--------------------|-------------------|-------------------|------------------------|--------|------------|
|  |       |             | A                  | B                 | C                 |                        |        |            |
| <b>Series 06 — 5 inch, 150 lb carbon steel vessel — 6 INCOLOY elements<sup>1</sup> (23 W/In<sup>2</sup>) with thermostat</b> |       |             |                    |                   |                   |                        |        |            |
| 9  | 240   | 1-1         | 41 $\frac{3}{4}$   | 30                | 11 $\frac{1}{2}$  | GCHI-06-009P-E1/240    | \$2791 | 135        |
| 9  | 240   | 1-3         | 41 $\frac{3}{4}$   | 30                | 11 $\frac{1}{2}$  | GCHI-06-009P-E1/240/3P | 2791   | 135        |
| 9  | 480   | 1-1         | 41 $\frac{3}{4}$   | 30                | 11 $\frac{1}{2}$  | GCHI-06-009P-E1/480    | 2791   | 135        |
| 9  | 480   | 1-3         | 41 $\frac{3}{4}$   | 30                | 11 $\frac{1}{2}$  | GCHI-06-009P-E1/480/3P | 2791   | 135        |
| 12   | 240   | 1-1         | 48 $\frac{3}{4}$   | 37                | 14 $\frac{1}{2}$  | GCHI-06-012P-E1/240    | 3201   | 164        |
| 12   | 240   | 1-3         | 48 $\frac{3}{4}$   | 37                | 14 $\frac{1}{2}$  | GCHI-06-012P-E1/240/3P | 3201   | 164        |
| 12   | 480   | 1-1         | 48 $\frac{3}{4}$   | 37                | 14 $\frac{1}{2}$  | GCHI-06-012P-E1/480    | 3201   | 164        |
| 12   | 480   | 1-3         | 48 $\frac{3}{4}$   | 37                | 14 $\frac{1}{2}$  | GCHI-06-012P-E1/480/3P | 3201   | 164        |
| 20   | 240   | 1-1         | 60 $\frac{1}{4}$   | 48 $\frac{1}{2}$  | 20 $\frac{1}{2}$  | GCHI-06-020P-E1/240    | 3856   | 195        |
| 20   | 240   | 1-3         | 60 $\frac{1}{4}$   | 48 $\frac{1}{2}$  | 20 $\frac{1}{2}$  | GCHI-06-020P-E1/240/3P | 3856   | 195        |
| 20   | 480   | 1-1         | 60 $\frac{1}{4}$   | 48 $\frac{1}{2}$  | 20 $\frac{1}{2}$  | GCHI-06-020P-E1/480    | 3856   | 195        |
| 20   | 480   | 1-3         | 60 $\frac{1}{4}$   | 48 $\frac{1}{2}$  | 20 $\frac{1}{2}$  | GCHI-06-020P-E1/480/3P | 3856   | 195        |
| 25   | 240   | 1-1         | 73 $\frac{3}{8}$   | 61 $\frac{1}{8}$  | 27 $\frac{5}{16}$ | GCHI-06-025P-E1/240    | 4670   | 212        |
| 25   | 480   | 1-3         | 73 $\frac{3}{8}$   | 61 $\frac{1}{8}$  | 27 $\frac{5}{16}$ | GCHI-06-025P-E1/480/3P | 4670   | 212        |
| 25   | 240   | 1-1         | 73 $\frac{3}{8}$   | 61 $\frac{1}{8}$  | 27 $\frac{5}{16}$ | GCHI-06-025P-E1/240    | 4670   | 212        |
| 25   | 480   | 1-3         | 73 $\frac{3}{8}$   | 61 $\frac{1}{8}$  | 27 $\frac{5}{16}$ | GCHI-06-025P-E1/480/3P | 4670   | 212        |
| 30   | 240   | 1-3         | 86 $\frac{1}{8}$   | 74 $\frac{1}{4}$  | 33 $\frac{3}{8}$  | GCHI-06-030P-E1/240/3P | 5422   | 240        |
| 30   | 480   | 1-3         | 86 $\frac{1}{8}$   | 74 $\frac{1}{4}$  | 33 $\frac{3}{8}$  | GCHI-06-030P-E1/480/3P | 5422   | 240        |
| <b>Series 18 — 8 inch, 150 lb carbon steel vessel — 18 baffled INCOLOY elements<sup>1</sup> (20 W/In<sup>2</sup>)</b>        |       |             |                    |                   |                   |                        |        |            |
| 30   | 240   | 3-3         | 54 $\frac{1}{16}$  | 32 $\frac{1}{16}$ | 29 $\frac{1}{16}$ | GCHIB-18-030P-E1/240   | 6699   | 350        |
| 30   | 480   | 3-3         | 54 $\frac{1}{16}$  | 32 $\frac{1}{16}$ | 29 $\frac{1}{16}$ | GCHIB-18-030P-E1/480   | 6699   | 350        |
| 40   | 240   | 3-3         | 61 $\frac{1}{16}$  | 39 $\frac{1}{16}$ | 36 $\frac{1}{16}$ | GCHIB-18-040P-E1/240   | 7081   | 420        |
| 40   | 480   | 3-3         | 61 $\frac{1}{16}$  | 39 $\frac{1}{16}$ | 36 $\frac{1}{16}$ | GCHIB-18-040P-E1/480   | 7081   | 420        |
| 50   | 240   | 3-3         | 68 $\frac{15}{16}$ | 47 $\frac{7}{16}$ | 43 $\frac{3}{16}$ | GCHIB-18-050P-E1/240   | 7560   | 480        |
| 50   | 480   | 3-3         | 68 $\frac{15}{16}$ | 47 $\frac{7}{16}$ | 43 $\frac{3}{16}$ | GCHIB-18-050P-E1/480   | 7560   | 480        |
| <b>Series 27 — 10 inch, 150 lb carbon steel vessel — 27 INCOLOY<sup>®</sup> elements<sup>1</sup> (15 W/In<sup>2</sup>)</b>   |       |             |                    |                   |                   |                        |        |            |
| 50   | 240   | 3-3         | 68 $\frac{9}{16}$  | 43                | 39 $\frac{1}{2}$  | GCHI-27-050P-E1/240    | 8236   | 400        |
| 50   | 480   | 3-3         | 68 $\frac{9}{16}$  | 43                | 39 $\frac{1}{2}$  | GCHI-27-050P-E1/480    | 8236   | 400        |
| 60   | 240   | 3-3         | 75 $\frac{9}{16}$  | 50                | 46 $\frac{1}{2}$  | GCHI-27-060P-E1/240    | 8696   | 440        |
| 60   | 480   | 3-3         | 75 $\frac{9}{16}$  | 50                | 46 $\frac{1}{2}$  | GCHI-27-060P-E1/480    | 8696   | 440        |
| 70   | 240   | 3-3         | 81 $\frac{9}{16}$  | 56                | 52 $\frac{1}{2}$  | GCHI-27-070P-E1/240    | 9126   | 480        |
| 70   | 480   | 3-3         | 81 $\frac{9}{16}$  | 56                | 52 $\frac{1}{2}$  | GCHI-27-070P-E1/480    | 9126   | 480        |
| 80   | 240   | 3-3         | 91 $\frac{1}{16}$  | 66                | 62 $\frac{1}{2}$  | GCHI-27-080P-E1/240    | 9705   | 520        |
| 80   | 480   | 3-3         | 91 $\frac{1}{16}$  | 66                | 62 $\frac{1}{2}$  | GCHI-27-080P-E1/480    | 9705   | 520        |
| 90   | 240   | 3-3         | 100 $\frac{1}{16}$ | 75                | 71 $\frac{1}{2}$  | GCHI-27-090P-E1/240    | 10,239 | 560        |
| 90   | 480   | 3-3         | 100 $\frac{1}{16}$ | 75                | 71 $\frac{1}{2}$  | GCHI-27-090P-E1/480    | 10,239 | 560        |

**Ordering Example: GCHIB-18-030P-E1/480** is a 30 kW, 3 Phase, 480 Volt Heater, \$6699.  
1. Outlet gas temperature must be kept below both maximum sheath and vessel temperature or element and heater damage may occur. Other Note — Refer to the Controls section for side mounted controls or control panels.

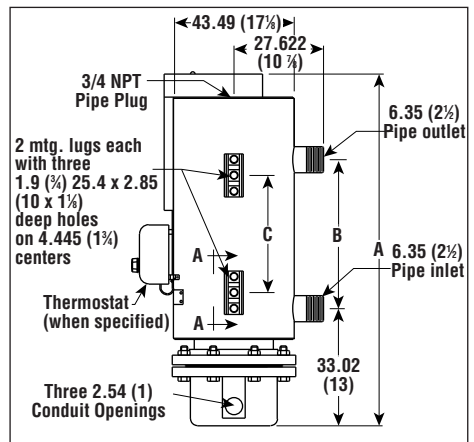
Dimensions: cm (in)  
GCHI-06



GCHIB-18



GCHI-27



# STEAM, AIR & GAS APPLICATIONS TO 750°F<sup>1</sup>

## GCHI/GCHIB Series



**MOST POPULAR MODELS HIGHLIGHTED!**

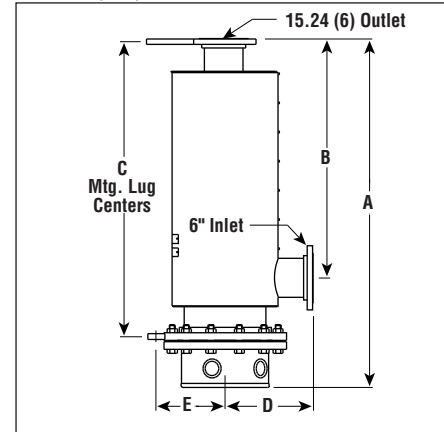
| To Order (Specify Model Number)  |       |             |                  |                                  |                                  |    |                                 |                             |                 |            |
|--|-------|-------------|------------------|----------------------------------|----------------------------------|----|---------------------------------|-----------------------------|-----------------|------------|
| kW   | Volts | Ckt & Phase | Dimensions (In.) |                                  |                                  |    |                                 | Model No.                   | Price           | Wt. (Lbs.) |
|  |       |             | A                | B                                | C                                | D  | E                               |                             |                 |            |
| <b>Series 45 — 14 inch, 150 lb carbon steel vessel — 45 INCOLOY elements<sup>1</sup> (15 W/in<sup>2</sup>)</b>   |       |             |                  |                                  |                                  |    |                                 |                             |                 |            |
| 75   | 480   | 3-3         | 76               | 57 <sup>3</sup> / <sub>16</sub>  | 66 <sup>1</sup> / <sub>16</sub>  | 15 | 11 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-45-075P-E1/480</b>  | <b>\$14,606</b> | 835        |
| 90   | 480   | 3-3         | 76               | 57 <sup>3</sup> / <sub>16</sub>  | 66 <sup>1</sup> / <sub>16</sub>  | 15 | 11 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-45-090P-E1/480</b>  | <b>15,975</b>   | 925        |
| 125  | 480   | 3-3         | 91               | 72 <sup>3</sup> / <sub>16</sub>  | 81 <sup>1</sup> / <sub>16</sub>  | 15 | 11 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-45-125P-E1/480</b>  | <b>16,579</b>   | 1025       |
| 150  | 480   | 3-3         | 106              | 87 <sup>3</sup> / <sub>16</sub>  | 96 <sup>1</sup> / <sub>16</sub>  | 15 | 11 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-45-150P-E1/480</b>  | <b>17,264</b>   | 1125       |
| 175  | 480   | 3-3         | 121              | 102 <sup>3</sup> / <sub>16</sub> | 111 <sup>1</sup> / <sub>16</sub> | 15 | 11 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-45-175P-E1/480</b>  | <b>17,787</b>   | 1225       |
| <b>Series 72 — 16 inch, 150 lb carbon steel vessel — 72 INCOLOY elements<sup>1</sup> (15 W/in<sup>2</sup>)</b>   |       |             |                  |                                  |                                  |    |                                 |                             |                 |            |
| 200  | 480   | 3-3         | 93               | 74 <sup>3</sup> / <sub>16</sub>  | 84 <sup>3</sup> / <sub>16</sub>  | 16 | 12 <sup>3</sup> / <sub>16</sub> | <b>GCHI-72-200P-E1/480</b>  | <b>22,571</b>   | 1265       |
| 225  | 480   | 3-3         | 101              | 82 <sup>3</sup> / <sub>16</sub>  | 92 <sup>3</sup> / <sub>16</sub>  | 16 | 12 <sup>3</sup> / <sub>16</sub> | <b>GCHI-72-225P-E1/480</b>  | <b>23,815</b>   | 1310       |
| 250  | 480   | 3-3         | 109              | 90 <sup>3</sup> / <sub>16</sub>  | 100 <sup>3</sup> / <sub>16</sub> | 16 | 12 <sup>3</sup> / <sub>16</sub> | <b>GCHI-72-250P-E1/480</b>  | <b>24,600</b>   | 1355       |
| <b>Series 108 — 18 inch, 150 lb carbon steel vessel — 108 INCOLOY elements<sup>1</sup> (15 W/in<sup>2</sup>)</b> |       |             |                  |                                  |                                  |    |                                 |                             |                 |            |
| 300  | 480   | 6-3         | 94               | 75 <sup>3</sup> / <sub>16</sub>  | 85                               | 17 | 13 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-108-300P-E1/480</b> | <b>27,515</b>   | 1400       |
| 325  | 480   | 6-3         | 100              | 81 <sup>3</sup> / <sub>16</sub>  | 91                               | 17 | 13 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-108-325P-E1/480</b> | <b>28,704</b>   | 1450       |
| 350  | 480   | 6-3         | 106              | 87 <sup>3</sup> / <sub>16</sub>  | 97                               | 17 | 13 <sup>1</sup> / <sub>2</sub>  | <b>GCHI-108-350P-E1/480</b> | <b>30,266</b>   | 1500       |

**Ordering Example:** **GCHI-72-200P-E1/480** is a 200 kW, 480 Volt Heater, \$22,571.  
 1. Recommended temperature limits for all GCHI heaters with carbon steel vessels and INCOLOY elements are 1600°F maximum for the sheath temperature and 750°F maximum for the vessel temperature at 5 psi pressure maximum. Exceeding these recommendations will void the factory warranty. Outlet gas temperatures must be kept below both the maximum sheath and vessel temperature or element and vessel damage may occur. Heaters supplied without controls.  
**Other Note** — Refer to the Controls section for side mounted controls or control panels.

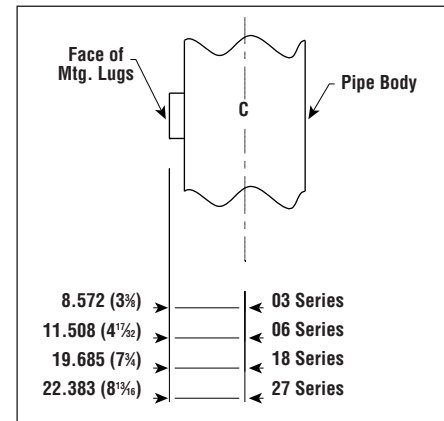
**Ordering Information**  
 To Order — Complete the Model Number using the Matrix provided.

| Model       | Steam, Air and Gas to 750°F <sup>1</sup>                 |  |             |                      |
|-------------|--|--|-------------|----------------------|
| <b>GCHI</b> | Gas Circulation Heater — INCOLOY Elements — Steel Vessel |  |             |                      |
| <b>B</b>    | Internal Baffles   |  |             |                      |
|             | Code   | Number of Elements                     |             |                      |
|             | <b>03</b>  | Three                                  | <b>45</b>   | Forty Five           |
|             | <b>06</b>  | Six                                    | <b>72</b>   | Seventy Two          |
|             | <b>18</b>  | Eighteen                               | <b>108</b>  | One Hundred Eight    |
|             | <b>27</b>  | Twenty Seven                           |             |                      |
|             | Code   | kW                                     |             |                      |
|             | <b>003P</b>  | 3                                      | <b>040P</b> | 40                   |
|             | <b>04P5</b>  | 4.5                                    | <b>050P</b> | 50                   |
|             | <b>006P</b>  | 6                                      | <b>060P</b> | 60                   |
|             | <b>009P</b>  | 9                                      | <b>070P</b> | 70                   |
|             | <b>012P</b>  | 12                                     | <b>075P</b> | 75                   |
|             | <b>020P</b>  | 20                                     | <b>080P</b> | 80                   |
|             | <b>025P</b>  | 25                                     | <b>090P</b> | 90                   |
|             | <b>030P</b>  | 30                                     | <b>125P</b> | 125                  |
|             | Code   | Terminal Enclosure                     |             |                      |
|             | <b>E1</b>  | General Purpose                        |             |                      |
|             | <b>E2</b>  | Moisture Resistant/Explosion Resistant |             |                      |
|             | <b>E3</b>  | Explosion Resistant                    |             |                      |
|             | <b>E4</b>  | Moisture Resistant                     |             |                      |
| <b>GCHI</b> | <b>45</b>  | <b>072P</b>                            | <b>E1</b>   | Typical Model Number |

Dimensions: cm (in)  
 GCHI-45, 72, 108



**GCHI-AA**



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### • Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters