

NDUSTRIA™ Gas-Fired High-Intensity Infrared Heaters GG-Series

Easy Buying and Online Ordering Guide

www.ndustria.com

Before you begin, please note that our infrared heaters should be installed by a contractor qualified in the installation and service of gas-fired heating equipment or your gas supplier; they require a gas line and appropriate, safe electrical service. However, whether you're an end user or a contractor, we hope this 6-step guide will make ordering easier by helping you gather key data in a simple worksheet, which you'll find below.

Once you've collected this information referenced in this buying guide, we realize that you may have additional questions about your specific space. We're here to help! Our experts are standing by Monday – Friday, 8:15 am – 4:45 pm EST for an online chat, which you can access from our website. Or you can call 716-551-7900, or email info@ndustria.com to get answers to your questions or other assistance in determining the best product to order.

The GG-series infrared heaters are intended for indoor spot heating in commercial/industrial applications, not for residential or outdoor use. The heater cannot be exposed to the outdoor elements. Heaters can be suspended from the ceiling using chain.

Step 1: What kind of fuel will you use?

Our heaters can use either natural gas (NG) or liquid propane (LP). Only select rates are available in LP gas. See specification sheet or installation, operation and service manual.

Step 2: What measurements are needed to determine how much heat or BTUs you need?

There are three key measurements you will want to collect:

1 Overhead structure/recommended mounting height. It's important to follow our guidelines. See specific guidelines chart at bottom of this page.

Let's begin with the height measurement by measuring the distance between the floor and the ceiling.

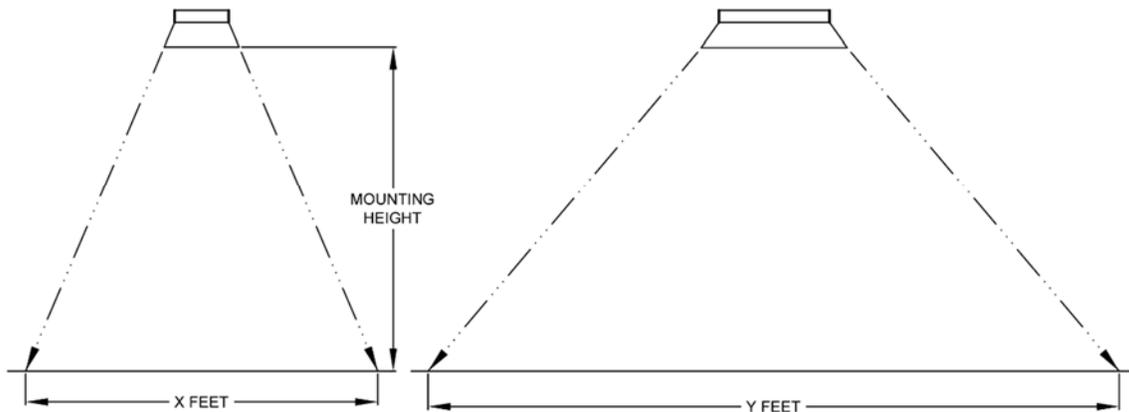
2 Total length and width of the area you wish to heat.

3 Survey your space to determine: Are there any clearances issues for structures, features, or objects that would interfere above, below, or to the sides of the unit? You will see minimum clearances recommendations in the installation, operation and service manual.

Step 3: You've measured. Now, let's talk about heat coverage.

Basic coverage calculation. The measure of the heat output you'll get from your system is BTUs. To determine the area of heat coverage, multiply the heat output factor by the mounting height. (e.g., to determine front to back (X) heat coverage of GG-80 installed at 18' above the floor: $2.0 \times 18' = 36'$). Determine side to side coverage by using the (Y) factor.

Floor Level Coverage



GUIDELINES FOR DETERMINING RADIANT PATTERN:

X FEET = Factor x Mounting Height

FACTORS	
GG30, GG33, GG35, GG40	2.0
GG60, GG66, GG70, GG80	2.0
GG100, GG120	2.0
GG132, GG140, GG160	2.0

Y FEET = Factor x Mounting Height

FACTORS	
GG30, GG33, GG35, GG40	2.0
GG60, GG66, GG70, GG80	2.3
GG100, GG120	2.6
GG132, GG140, GG160	2.9

Example: GG80 with standard reflector mounted at 18 feet.

X FEET = $2.0 \times 18' = 36$ feet
(Front to Back Coverage)

Y FEET = $2.3 \times 18' = 41.4$ feet
(Side to Side Coverage)

Heater Spacing

For applications that require multiple heaters, understanding how far apart to space the heaters is simple. Follow this simple rule:

For consistent heat coverage, it is ideal to space the heaters apart the same distance as the mounting height. e.g., if the mounting height is 14', the heaters should be spaced approximately 14' apart.

Step 4: You have two options for how you mount the heater

The heater can be mounted level or tilted up to a 35° angle.

When installed in a **level** orientation, the radiant heat will deflect straight down. 35° tilt will deflect the heat downward but also toward the middle of the space.

For example, if you install the heaters away from a wall and you are able to install the heater directly over the targeted area, it is recommended to install the heater level.

If the heater is installed on a wall, or to the side of a dock door, you likely would want the heater tilted at a 35° angle concentrating the radiant heat towards the targeted heating area.



General tips and recommendations:

There are three elements that warrant consideration and possibly a conversation with your installer before you order if you have any concerns.

- You'll want to identify available heater mounting points and access to gas and electric supplies.
- Make sure your installer follows and plans for our recommended clearances distances above, below, and to the sides of the heater.
- Ensure that your installer observes ventilation guidelines in enclosed spaces, if required. See installation, operation and service manual for guidance.

Worksheet

Natural Gas or Propane?		
Overhead/mounting height (Note: maintain appropriate clearances to combustibles as specified in the installation, operation and service manual)		
Heated space (length X width)		
Any clearances issues?		
How many units/unit size?		

Sample worksheet, filled out, ready to use for ordering:

Natural Gas or Propane?	NG	
Overhead/mounting height (Note: maintain appropriate clearances to combustibles as specified in the installation, operation and service manual)	18' from floor to ceiling	
Heated space (length X width)	36' X 42'	
Any clearances issues?	No	
How many units/unit size?	1 unit / GG-80	

GG-Series guidelines chart with additional specifications

Model	Recommended Mounting Height	Clearances to Combustibles			Front to Back Heat Coverage Factor (X)	Side to Side Heat Coverage Factor (Y)	Heater Dimensions		
		Sides	Above	Below			Length	Width	Height
GG-30	11' - 13'	30"	36"	72"	2.0	2.0	15 3/4"	26 1/2"	7 3/4"
GG-33									
GG-35									
GG-40									
GG-60	13' - 15'	48"	48"	98"	2.0	2.3	21 5/8"	26 1/2"	7 3/4"
GG-66									
GG-70									
GG-80									
GG-100	15' - 17'	48"	64"	128"	2.0	2.6	27 1/2"	26 1/2"	7 3/4"
GG-120									
GG-132	17' - 20'	60"	64"	136"	2.0	2.9	33 3/8"	26 1/2"	7 3/4"
GG-140									
GG-160									

Some tips on using this chart:

Once you have the dimensions of your space, first look at the mounting height that is recommended. As mentioned above, to determine the area of heat coverage, simply multiply the heater mounting height by the heat coverage factor from side to side and front to back. Now, you have an idea of the BTUs you will need for that space.