

THANK YOU!!

Thank you very much for selecting Fostoria's portable electric infrared heating equipment for your comfort heating needs. These products were engineered with the most reliable components and materials available and are equipped with features to insure ease of installation and maintenance.

The warmth you will now enjoy when using this heating equipment is created by a heat source; a metal-sheathed element; that emits infrared energy in the form of heat, like the sun. This is an economical way to heat because it heats people and objects, not the air, so you don't need to heat a large area to feel warm.

CHECKING YOUR SHIPMENT

- Upon receipt of your shipment, check all cartons for visible damage.
- Claims for damaged material or shortages that were not evident upon receipt of shipment must be reported to carrier and TPI Corporation's customer service (800-251-0382) immediately.
- Any accessory items ordered for the heater will be shipped in separate cartons.

GENERAL DESCRIPTION & USE

WARNING

**EXPLOSION HAZARD
FIRE HAZARD
BURN HAZARD**

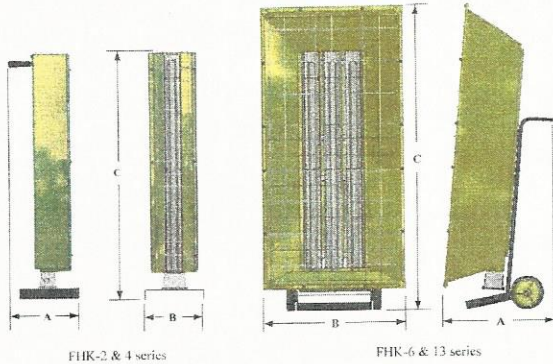
- Serious injury or death may occur.
- Not for indoor residential use.
- Do not use outdoors in wet conditions and in unprotected locations.
- Use for comfort heating only.
- Do not use in locations containing hazardous or explosive atmospheres.
- Comply with "REQUIRED CLEARANCES" table at right for minimum clearances to combustible materials.

The Fostoria FHK-series is a line of heavy-duty portable heaters designed to provide electric infrared heat when permanently installed heaters are not practical or economical. They are easily transported to the work site and connected to disconnect switches or lighting centers. The units are suited to a wide variety of indoor and protected outdoor commercial or industrial uses. They operate cleanly, emitting no fumes or odors.

Applications where combustible materials and/or personnel will be located near these heaters require the addition of a ground-fault sensing switch as part of the electrical circuit. See the INSTALLATION PLANNING section of this manual for more details. Any installation of these heaters must also adhere to the minimum clearance information below.

MODEL	REQUIRED CLEARANCES TO COMBUSTIBLES FROM FRONT OF HEATER
FHK-212-1CA	2 Feet
FHK-2	3 Feet
FHK-4	3 Feet
FHK-6	4 Feet
FHK-13	7 Feet

SPECIFICATIONS (cont.)



INSTALLATION PLANNING

Fostoria's metal-sheath infrared heaters are equipped with heating elements that are manufactured using materials with exceptional mechanical and thermal performance and are built with precise process control to provide rugged and reliable infrared performance in challenging environments. It is our understanding that these precision characteristics can change with time, specifically in environments with high humidity or where mechanical damage can occur, causing the internal electrical insulation to weaken. Use of Fostoria's GF-SK-1 ground fault sensing switch will monitor this gradual change and interrupt power to the heaters prior to any arc-fault type failures, thereby protecting against a possible fire or burn hazard. Any installation where this is a concern must be protected by using the GF-SK-1 switch.

WARNING

**FIRE HAZARD
BURN HAZARD**

- To prevent arcing type faults, premature element failure and potential fire or burn hazard, use Fostoria model GF-SK-1 ground fault switch with these heaters.
- Read and follow all instructions provided for proper installation of heaters and GF-SK-1.

SPECIFICATIONS

FHK-2 & FHK-4 Series:

- Powder-coated steel base and large carry handle
- Gold-anodized aluminum housing for good reflectivity and corrosion resistance
- Housing is of double-wall construction for reduced surface temperatures
- Features aluminum extrusion and element support clip for high-vibration areas and rugged environments
- U-shaped metal-sheath elements are factory-installed and mounted on a cast aluminum terminal box
- 120V model (FHK-212-1CA) is equipped with 15ft cordset with NEMA 5-15 molded plug

FHK-6 & FHK-13 Series:

- Heaters are mounted on steel handcars with 6-inch wheels, which allow easy transport to the job site.
- Gold-anodized aluminum housing for good reflectivity and corrosion resistance
- Housing is of double-wall construction for reduced surface temperatures
- Features aluminum extrusion and element support clip for high-vibration areas and rugged environments
- U-shaped metal-sheath elements are factory-installed and mounted on a corrosion protected steel terminal box
- Model FHK-624-1CA is equipped with a 15ft. type S, 3-wire cable with a #10-3 dryer plug

Heater Model	Voltage And Phase	Amps 1ph.	Amps 3ph.	Number Of Elements	Watts	Bu's/Hr.	Dimensions (in.)		
							A	B	C
FHK-212-1CA	120; 1ph	15.0	n/a	1	1800	6,142	13-1/2	11-1/2	28-1/2
FHK-220-1A	208; 1ph	9.7	n/a						
FHK-224-1A	240; 1ph	8.4	n/a						
FHK-227-1A	277; 1ph	7.2	n/a						
FHK-248-1A	480; 1ph	4.2	n/a	1	4500	15,355	13-1/2	11-1/2	48-3/4
FHK-257-1A	600; 1ph	3.5	n/a						
FHK-420-1A	208; 1ph	21.7	n/a						
FHK-424-1A	240; 1ph	18.8	n/a						
FHK-427-1A	277; 1ph	16.3	n/a	3	6000	20,473	17	19-3/4	37-1/2
FHK-448-1A	480; 1ph	9.4	n/a						
FHK-457-1A	600; 1ph	7.8	n/a						
FHK-620-3A	208; 1 or 3ph	28.9	16.6						
FHK-624-3A	240; 1 or 3ph	25.0	14.4	3	13,500	46,064	19	27-1/2	59
FHK-624-1CA	240; 1ph	25.0	n/a						
FHK-627-3A	277; 1ph	21.7	n/a						
FHK-648-3A	480; 1 or 3ph	12.5	7.2						
FHK-657-3A	600; 1 or 3ph	10.4	6.1	3	13,500	46,064	19	27-1/2	59
FHK-1320-3A	208; 3ph	n/a	37.4						
FHK-1324-3A	240; 3ph	n/a	32.4						
FHK-1327-3A	277; 3ph	48.8	n/a						
FHK-1348-3A	480; 3ph	n/a	16.2	3	13,500	46,064	19	27-1/2	59
FHK-1357-3A	600; 3ph	n/a	13.6						

Please see illustrations on next page regarding dimensions in table.

OPERATION

WARNING

**FIRE HAZARD
BURN HAZARD**

- Serious injury or death may occur.
- Always operate heaters on level surfaces.
- Allow heater to fully cool after power is removed before touching or working on it.
- Do not leave heaters unattended while in operation
- Maintain minimum clearances to combustibles as shown in table below.

When power is provided to these heaters the heater elements will take several minutes to achieve full infrared output that can be confirmed by an orange to dull red glow on the element sheath. The element sheath under this condition is operating between 1,500 and 1,600° F emitting medium wavelength (approx. 3 microns or millionths of a meter) infrared energy. This energy, that can also be considered "radiation" is not harmful, yet is very effective at heating objects and surfaces that are within the line-of-sight of the elements and the heater's reflective surfaces.

When power is provided or removed from these heaters, you may hear unfamiliar sounds that are caused by the expansion and contraction of metal components in the heater. This is normal.

There are no on/off switches, tip-over switches or over-temperature safety cut out devices included on any of these heaters. See the Accessories section of this manual for more details.

MODEL	REQUIRED CLEARANCES TO COMBUSTIBLES FROM FRONT OF HEATER
FHK-212-1CA	2 Feet
FHK-2	3 Feet
FHK-4	3 Feet
FHK-6	4 Feet
FHK-13	7 Feet

CAUTION

If any metal-sheath element has an obvious "bowing" or sagging condition during operation, an over-voltage / over-temperature condition may exist. De-energize the heater immediately and allow to fully cool. Replace all elements that have been distorted in any way. Before returning power to heaters, make certain the power supply voltage is no more than 2% above the rating on the heater data label.

OPERATION (cont.)

Ground-Fault Monitoring and Operation:

As explained in the "Installation Planning" section of this manual, most, if not all, applications using metal-sheath heaters will require the use of the GF-SK-1 ground-fault sensor switch. Refer to the instructions provided with this switch for proper installation.

If, during heater operation, the GF-SK-1 "trips" and interrupts power to your heater or heater circuit, then one or more of the metal-sheath elements in the heater or heater circuit being monitored has a reduced insulation resistance value that may be due to an element that is about to fail. Have a licensed electrician follow the warnings and instructions in the "operation" section of the GF-SK-1 manual.

WARNING	
  	<p style="margin: 0;">FIRE HAZARD BURN HAZARD</p> <ul style="list-style-type: none">• To prevent arcing type faults, premature element failure and potential fire or burn hazard, use Fostoria model GF-SK-1 ground fault switch with these heaters. • Read and follow all instructions provided for proper installation of heaters and GF-SK-1.

MAINTENANCE

Pre-Season Maintenance and Annual Inspection

To ensure your safety and years of trouble-free operation from the heaters, periodic service and inspections must be done by a trained maintenance person or licensed electrician.

To obtain maximum performance from your heater(s) each year, we recommend the following be performed at the start of the heating season:

1. Clean housing reflector surfaces with a damp cloth.
2. Blow or dust off the elements and inner reflectors.
3. Repair or replace damaged power cables.
4. DO NOT hose-down these heaters.

Storage

When storing the heaters for long periods they should be covered to avoid accumulation of dust and other contaminants. Keep them in dry areas away from dripping or standing water and heavy humidity.

CAUTION
• Do not store in a damp location.