



## TECHNICAL DATA

### Model F-1 MAINTENANCE AIR COMPRESSOR

#### 1. PRODUCT NAME

Viking Model F-1  
Maintenance Air Compressor  
Part No. 11497 - 115V, 60 Cycle  
Available since 2001.  
Part No. 11498 - 220V, 50 Cycle  
Part No. 12629 - 230V, 60 Cycle  
Part No. 12630 - 110V, 50 Cycle  
Available since 2004.

#### 2. MANUFACTURED FOR

The Viking Corporation  
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Hastings, Michigan 49058 U.S.A.  
Telephone: (269) 945-9501  
(877) 384-5464  
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#### 3. PRODUCT DESCRIPTION

The Viking Model F-1 Maintenance Air Compressor is an electric motor-driven, air-cooled, single-stage, oil-less compressor.

The unit is equipped with a check valve and provides a regulated (by pressure switch setting) and restricted (60 Cycle - 2.1 SCFM at 0 psi gauge to 1.5 SCFM at 50 psi gauge) or (50 Cycle - 1.6 SCFM at 0 psi gauge to 1.2 at 50 psi gauge) air supply. A pressure relief valve is factory installed to prevent pressurizing system piping above 65 psi (448 kPa). Model F-1 is for pressures above 15 psi.

The Viking Model F-1 Maintenance Air Compressor may be used to automatically maintain air pressure in a dry system after the system has been filled from a non-continuous air supply. It may be used as a basic air supply for dry systems of 150 gallons capacity or smaller.

#### 4. TECHNICAL DATA

##### Approval

**Part No. 11497**

cUL 2125 Approved

FM Approved

**Part No. 11498, 12629 and 12630**

FM Approved

**115V single phase, 60 Cycle AC**

Service Factor Amperage: 6.4

Factory Wired 115 V

**220V single phase, 50 Cycle AC**

Service Factor Amperage: 2.6

Factory Wired 220 V

**230V single phase, 60 Cycle AC**

Service Factor Amperage: 3.5

Factory Wired 230 V

Form No. F\_032101

#### 110V single phase, 50 Cycle AC

Service Factor Amperage: 5.2

Factory Wired 110 V

##### Pressures:

Pressure Range: 14-60

Pressure Differential: 6-16

##### Motor Compressor Unit:

- 1/4 Horsepower, direct drive.
- Permanently lubricated bearings.
- Self-lubricating pistons.
- Stainless Steel valves.
- Automatically resetting thermal protection.
- 60 cycle compressor produces 1.5 SCFM at 50 psi (345 kPa) continuous operating pressure.
- 50 cycle compressor produces 1.2 SCFM at 50 psi (345 kPa) continuous operating pressure.
- Safety Relief Valve set at 65 psi (448 kPa).
- Shipping weight of complete assembly: 30 pounds (13,6 kg).
- Recommended ambient temperature range: 35 °F to 95 °F (2 °C to 35 °C).

Switch Manufactured by: Furnas

**CAUTION:** Compressor pressure relief valve is set to open at 65 psi (448 kPa). Compressor will run continuously when the switch is set at or above 65 psi (448 kPa).

**CAUTION:** Cycle switch to determine actual setting before proceeding with readjustment.

- Proof-tested to maintain accuracy and withstand occasional maximum pressure of 250 psi (1 724 kPa), to allow hydrostatic testing after installation.

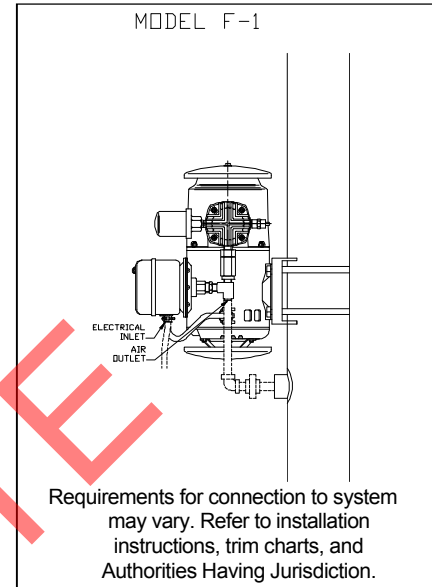
- Motor Electrical Ratings:

#### 5. FEATURES

- Carbon steel mounting bracket with stainless steel adjustable straps. One size bracket fits pipe sizes of 2"-10".
- Adjustable pressure switch.
- Check valve factory installed at the compressor outlet.
- A pressure relief valve is factory installed at compressor outlet to prevent pressurizing system piping above 65 psi (448 kPa).

#### 6. AVAILABILITY AND SERVICE

The Viking Model F-1 Maintenance Air Compressor is available through a network of domestic, Canadian, and international distributors. See



the Viking web site for a local distributor or contact The Viking Corporation.

Viking technical data may be found on The Viking Corporation's Web site at <http://www.vikingcorp.com>. The Web site may include a more recent edition of this technical data page.

#### 7. GUARANTEES

For details of warranty, refer to Viking's current list price schedule or contact The Viking Corporation directly.

#### 8. INSTALLATION

This unit is intended for installation indoors for use on dry sprinkler systems in accordance with the Standard for Installation of Sprinkler systems, NFPA 13 and the National Electrical Code NFPA 70. The compressor must be installed in an area not exposed to the weather, freezing temperatures, or physical damage.

The air compressor should be sized to restore and maintain the air pressure in the sprinkler system in accordance with the requirements of NFPA 13.

When corrosive atmospheres and/or contaminated water supplies are present, it is the owner's responsibility to verify compatibility with the Air Maintenance Compressor and associated equipment.



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The compressor outlet includes a check valve. Output is regulated (by pressure switch setting) and restricted (60 Cycle - 2.1 SCFM at 0 psi gauge to 1.5 SCFM at 50 psi gauge) or (50 Cycle - 1.6 SCFM at 0 psi gauge to 1.2 at 50 psi gauge). For low volume systems, such as pneumatic release lines, it is recommended to install a receiver tank between the compressor and the system being supplied.

The Model F-1 Maintenance Air Compressor may be installed vertically or horizontally. There must be at least 12" of clearance from side-walls, floors and ceilings to insure the unit will operate correctly. Firmly mount the unit to a stable, rigid surface by bolting it through the slotted holes in the motor mounting base. To "riser" mount the unit, a vertical mounting kit is available. The kit is provided with stainless steel adjustable straps and hardware that make it suitable for mounting to all sizes of pipes. (refer to Figure 1).

1. Place the "V" notches of mounting bracket against riser.
  - a. Place mounting straps around riser, and through the square slots provided in the mounting base.
  - b. Tighten mounting straps.
2. Mount the compressor unit to the mounting bracket.
  - a. Tighten all bolts—four mounting bolt sets are provided.
3. Install air supply piping from the 1/4" (8 mm) NPT outlet tee of the compressor to the dry system piping.
  - a. When connecting to dry systems equipped with a Viking Model E Accelerator and Model B Anti-flood Device, refer to the appropriate Model E Accelerator trim chart. Connect compressor outlet to the trim as indicated in the trim chart.
  - b. Apply a small amount of pipe-joint compound or tape to the external threads of all pipe connections required. Take care not to allow any compound, tape, or other foreign

De-energize electrical supply circuits before servicing or connecting the unit.

4. Connect the electrical supply from an uninterrupted, dedicated circuit. The field wiring for the unit is made inside the pressure regulating switch. The switch is factory preset and sealed to cutout at 50 PSI. **DO NOT ADJUST ABOVE 50 PSI.**
  - a. Compressor motor and pressure switch are factory wired.
  - b. Remove access cover shown in Figure 2 (screw driver is required).
  - c. Connect wires as shown in Figure 1 wiring diagram.
 

**Note:** Comply with all national and local codes and requirements of the Authority Having Jurisdiction.
  - d. Reinstall switch access cover prior to operating the compressor.
  - e. Do not exceed electrical ratings shown on switch or motor nameplates.

5. Test the compressor pressure switch setting, noting the pressure at which the compressor starts and shuts off. Adjust the pressure switch to the required setting.
  6. To adjust the set point of the pressure switch:
    - a. De-energize electrical supply and remove the switch cover (screw driver is required).
    - b. To adjust the set point of the switch, turn the screw as shown in Figure 1).
 

**To raise the set point,** turn the pressure range adjustment screw clockwise (see Figure 1).

**To lower the set point,** turn the screw counterclockwise.
    - c. Re-install switch cover. Test the compressor pressure switch setting, noting the pressure at which the compressor starts and shuts off. If necessary, repeat steps 6 a-c.

### 9. MAINTENANCE

The compressor motor is equipped with thermal protectors that reset automatically. **WARNING:** Disconnect electrical power before servicing. Thermal protector can automatically start motor when device resets.

1. The motor compressor unit should be kept dirt-free.
2. The compressor inlet filter should be cleaned or replaced as required.
  - a. To inspect the inlet filter, pull the plastic cap to remove it from the filter case.
  - b. Filter can be removed for inspection. Do not clean filter elements with petroleum-based products.
  - c. Re-install filter and cap. Do not operate compressor without a filter.
3. Do not lubricate the compressor or motor. The bearings are permanently lubricated and sealed.

