

Installation instructions for **HMI** HOYME Motorized Ventilation Air FLUE DAMPER - SERIES 'HAC - F'

THIS INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ENFORCING AUTHORITIES



Damper profile up to 9" diameter.



Damper profile for 10" and over.

The **Ventilation Air Flue Damper**, Series 'HAC - F', is designed to save energy by stopping the escape of warm air up the chimney vent while the heating appliance is not firing and is interlocked to be open during firing. **It shall be securely installed close to the appliance and equal in size to the factory built chimney or vent.** This damper is spring loaded and fails-safe-open in the event of power failure. If continuous power is not supplied to the Damper from the **appliance transformer**, (24Vac) **an auxiliary transformer** (24Vac) connected to the appliance power source is required. If the safety circuit is not fuse protected, an **in-line fuse** is required and may be purchased direct from the factory. Use part **#3152-001**. (See wiring diagram)

For **COMMERCIAL** installations having other than 24Vac, **RELAY ADAPTORS** are available to interface this Damper to a **250mVdc - 100Vdc and 120Vac Safety Control System**.

This installation shall be in accordance with: In Canada - CAN/CSA B149 & B139; In the USA - ANSI/NFPA 54, 2006, ANSI Z223.1 and/or local codes including local codes relating to exhaust vent installation. A qualified contractor shall be consulted regarding the installation of this damper.

Specifications:

Motor 24Vac,- 5 Watts, 50/60 Hz. .

Relay Coil 0.05 Amps.

Damper Identification:

e.g.: **HAC-06-*4-1-SPC - F**

Series-Dia. Motor- Relay-Switch-PC- 'F'

HAC - 06 *4 1 - S PC - 'F'

Series: |
Dia.(in.) |
*No. of Motors |
No. of Relays |
Damper Proving Switch |
PC=Power Close |

Suffix F-designates a Flue Damper.

***4** - designates a **Belimo** actuator, **spring return**.

VENTILATION FLUE AIR CONTROL DAMPERS are designed to have a 10% bypass to allow for a minimum escape of air during the off cycle of firing. Nylon bearings and all wiring are mounted 1" away from the heated part of the damper to prevent the effects of excess heat.

Dampers are designed for years of trouble free service. Lubrication is usually not necessary.

ELECTRICAL WIRING shall be done in accordance with the National Electrical

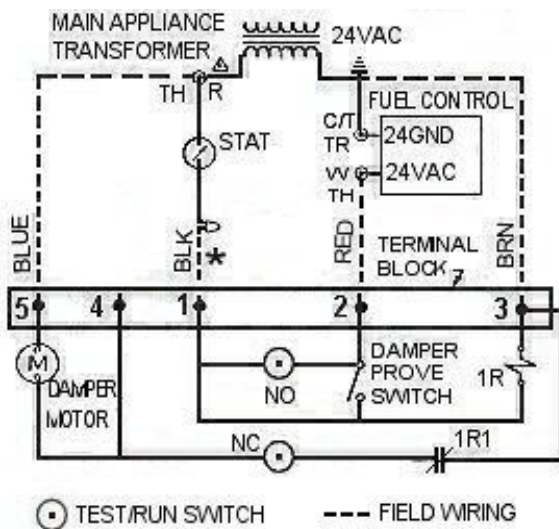
Codes or with Local Codes where they prevail. Additional wire shall be of the same size and type as used with existing control circuits. Wiring thereto shall be well secured and reasonably remote from any source of heat.

INSTALLER must be a trained, qualified person. Labels and damper position shall be readily visible when in the installed position.

- **Before interlocking this Damper to a safety control circuit**, the heating appliance is to be checked for proper operation, according to its manufacturer's specifications and according to applicable codes.

SCHEMATIC WIRING DIAGRAM OF FLUE VENT DAMPER SERIES 'HAC - F' INTERCONNECTED TO 24VAC SAFETY CONTROL SYSTEM USING APPLIANCE TRANSFORMER.

Motor 0.33 Amps. Relay coil 0.05 Amps



Note: This marking is also on label to be affixed adjacent to appliance wiring diagram.

*Inline fuse required if not previously protected and may be ordered from the factory. Use part #3152-001 c/w 3 amp fuse.

- Regular circuits -- solid line
- Damper Field circuits - - - - -
- Typical location for 24Vac Limit Control when used in appliance circuit / \ .
- Additional wire shall be of the same size and type as originally used.
- When needed, an approved 24Vac

transformer of ample capacity may be added with the primary leads connected to the line voltage supply of the appliance and shall be synchronized with the existing transformer.

- Always conduct a thorough check-out after installation is complete.
- Sequence the appliance through at least three normal cycles to confirm proper operation.
- Affix appropriate labels and follow instructions and warnings on each label.

HOOK-UP PROCEDURE - USING APPLIANCE TRANSFORMER- 24VAc

Note: Damper closes by 24VAc power when appliance is not firing, and springs open when appliance fires. **Appliance will not fire unless damper is in the open position.**

Test/Run switch shall be in 'Run' position.

1. Turn thermo/aqua-stat to lowest setting.
2. Turn off electrical power supply.
3. Connect Damper BLUE (5) wire to 24VAc transformer live side (R on appliance terminal strip) or to the transformer wire leading to the 'stat.
4. Connect Damper BROWN (3) wire to 24VAc transformer Common side ('C' on terminal strip) or to transformer wire leading to 'TR' on gas valve
5. Test by turning on power supply. Damper will close. Turn off power supply.
6. Remove stat wire connected to 'W' on terminal strip or 'TH' on gas valve and with wire nut connect to damper BLACK (1) wire (sensor) *See wiring diagram regarding fuse protection.
7. Connect damper RED wire (2) back to 'W' on terminal strip or 'TH' on gas valve. (Signal)
8. Turn on power supply and damper will close. Turn 'stat to call for heat. Damper will open and appliance will operate normally.

INSTRUCTIONS FOR USING AN AUXILIARY TRANSFORMER FOLLOW ON PAGE 3:

TROUBLESHOOTING PROCEDURE:

Note: Test/Run switch shall be in 'Run' position during normal operation of the appliance. 'Test' position turns off the power to the damper causing it to open while at the same time shorting the end switch which isolates the damper circuit from the appliance. **If appliance does not fire when the Test/Run switch is in the 'Test' position, a faulty furnace circuit is indicated.**

If the appliance fires only when the switch is in the test position (or if terminals 1 and 2 are joined), then a faulty end switch is suspected.

The end switch should make a "click" sound as the damper moves between open and closed positions. This test can be done by switching the "Test/Run Switch" on the damper.

NOTE: Whenever Test/Run switch is in 'Test' position, **Damper** shall be in the **Open** position.

Damper does not close after firing cycle:

This indicates- 1) faulty motor; 2) faulty relay.

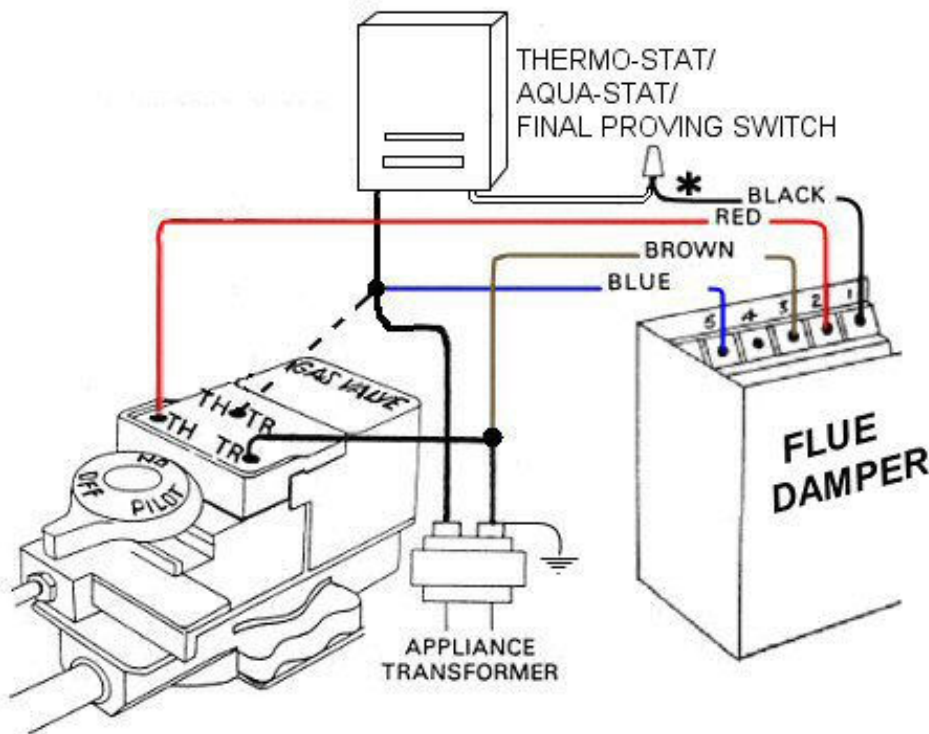
Procedure: Use a jumper between terminals 3 and 4. If damper closes, faulty relay is indicated. No response indicates a faulty motor or lack of power.

Damper does not open when stat asks for heat.

This indicates: 1) Signal is not getting through from stat; 2) Faulty relay coil; 3) Faulty return spring to open the Damper.

Procedure: 1) With jumper, join terminals 1 and 5. If damper opens, a faulty stat or fuse (if used) is suspected. Check fuse. Join terminals 1 and 2 and furnace does not fire, a faulty stat is confirmed.

Flue Damper Interlocked to a Safety Controlled Gas Valve



* INLINE FUSE REQUIRED IF CIRCUIT IS NOT PREVIOUSLY PROTECTED