MFH OPERATION & MAINTENANCE

DESCRIPTION

An MFH terminal may be used as a horizontal (ONLY) furnace or blower heater. When used with a remote primary air damper, the discharge of the MFH unit is inserted into the low pressure duct work down stream of the primary air damper.

INSPECTION AND HANDLING

Immediately inspect each unit for damage upon receipt. File damage claims with the freight carrier and advise the shipper. Store in a clean dry location and do not stack units or cartons more than four high. Do not lift units by the collars.

INSTALLATION

A. Before installation, remove packing and all foreign material from unit.
B. Suspend unit from building structure in a *horizontal* plane with access panels on the sides. Do not obstruct access panels with support channels, straps or T-bar supports.
C. Check blower wheel for free rotation.
D. Slip flexible or hard duct over inlet collar. Fasten and seal connections to prevent leakage. Close coupling of the inlet to main supply duct is not recommended. For optimum control, allow at least 1-1/2 duct diameters up stream of the inlet to be straight and unrestricted.
E. Connect outlet end of the assembly using low pressure insulated duct. Fasten and seal all joints to prevent leakage.
F. Filters must be installed where required. (Highly recommended on units with hot waters coils).
G. Thermostat must be calibrated and in control at desired setting.
H. Duct work and duct connections must be tight and free from leaks.
I. All foreign materials must be removed from duct system.

MAINTENANCE

Filters - Disposable filters should be changed and washable filters should be cleaned a minimum of twice per heating season to avoid excessive restriction of air flow. If excessive accumulation is noted due to dusty environment, change filters more frequently.

Blower and Motor - Fan terminals are supplied with PSC motor. Inspect motor assembly at least twice a year. Motors are permanently lubricated for normal lifetime use. However if lubrication is required oil motor with two drops of 3-in-1 oil or 10 weight oil. Clean as necessary. Motors and blowers are mounted on a motor plate assembly located behind access panel. Motor has built in thermal overload which automatically resets after a short time.

Caution

Electrical requirement

A. Provide a safety disconnect per NEC 424-19, 20 & 21.
B. Disconnect incoming power before wiring or servicing unit.
C. All field wiring must be in accordance with NEC and local requirements. All units with electric heat should have copper wire sized at least 125% of nameplate amperage.
D. Observe wiring diagram and instructions mounted on the unit. 208/480/3 Phase wire units require a 4th wire (NEUTRAL) wire in addition to the full sized ground wire. All units must be grounded as required by NEC 424-14 and article 250.

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Problem	Possible solution
A. Fan motor does not run.	* Fan disconnect circuit breaker is open-*energize circuit*. * Thermostat is not calling for heat-*raise temperature setting* and or *recalibrate.* * Fan P.E. switch is open-*verify switch setting verify switch action (open or close on pressure rise).* * Verify supply voltage and wiring diagram. * Bearing or motor wheel jammed - *free wheel* * Fan motor damaged - *replace motor.*
B. Unit blows insufficient air.	* Check for dirty filters, or other restrictions *clean or replace dirty filters (if applicable) clean hot water coil (if applicable)* * Re-adjust fan speed control (SCR) for additional (CFM).
C. Unit blows cold air only <u>No Heat</u>	* Verify operation of all heating equipment. *For hydronic systems verify hot water supply temperature. Vent all system piping.* * Disconnect, fuses or circuit breaker may be open. *Energize circuit* and *verify fan operation.* * Air flow switch may not prove air flow. *Verify air flow, check sensing probe and tube for obstruction.* * Thermal cutouts are tripped. *Reset* or *replace cut-out; check for air flow obstruction.* * Low voltage. *Verify supply voltage against nameplate data.* * Heating element or contactor defective. *Replace with original factory replacement parts.* * Broken wire in control circuit or control circuit improperly wired. *Check wiring diagram in unit.*

Description	Part Number
1/15 HP 277 Volt Motor	29141017
1/6 HP 277 Volt Motor	29141008
1/4 HP 277 Volt Motor	29141009
1/3 HP 277 Volt Motor	29141010
1/2 HP 277 Volt Motor	29141011
3/4 HP 277 Volt Motor	29141012
1/15 HP 115 Volt Motor	29421001
1/6 HP 115 Volt Motor	29141002
1/4 HP 115 Volt Motor	29141003
1/3 HP 115 Volt Motor	29141005
1/2 HP 115 Volt Motor	29141005
3/4 HP 115 Volt Motor	29141012
1/6 HP Capacitor 4.0 UF	29152004
1/4 HP Capacitor 5.0 UF	29152005
1/3 HP Capacitor 10.0 UF	61903018
1/2 HP Capacitor 10.0 UF	61903018
3/4 HP Capacitor 20.0 UF	29052003
Motor speed controller 277/5	29144027
Motor speed controller 277/10	29144026
Motor speed controller 208/277/5	29144029
Motor speed controller 208/277/10	29144028
Motor speed controller 115/5	29144025
Motor speed controller 115/10	29144021
2 Pole control terminal block	40525001
3 Pole control terminal block	40525002
4 Pole control terminal block	40525003
6 Pole control terminal block	40525004
Contactor 1 Pole 30 Amp 24 Volt coil	58027061
Contactor 2 Pole 30 Amp 24 Volt coil	58027001
Contactor 2 Pole 30 Amp 115 Volt coil	58027002
Contactor 2 Pole 30 Amp 240 Volt coil	58027003
Contactor 2 Pole 30 Amp 277 Volt coil	58027004
Fuse Link 103 degree (7200 Series only)	29157004
Auto Reset High Limit 130 degree	29176002