

Gas-Fired Tempered Make-Up Air Unit

Model:

TK3ECDD-3PH-FF

3-Phase, 208V, 4.80 HP, Direct Drive, ECM Motor with Motorized Damper and 25" Blower. MAX 6600 CFM's



TK3-750-25Z Direct Fired Direct Drive (988 lbs.)



Direct Gas Fired Heated Make Up Air Unit with 25" Direct Drive Fan and 18" Burner.

Supply Motor:

Model 163904/A01-ECM-60-240-25, 4.800 HP, 3 Phase, 208 V, 60Hz, 11.5 FLA, ODP-ECM (Open Drip Proof Electronically Commutated Motor)

Burner:

Min Output BTU: 27,500 BTU/Hr
Max Output BTU: 825,000 BTU/Hr
Size: 18" long
Gas Type: Natural

Supply Performance:

Volume Range: 3500-6600 cfm
RPM: 1540
TS: 10079 ft/min
SP: 0.657" w.g.
0.500" Ext. + 0.123" Int. + 0.034" Opt.
BHP: 4.207

Heating Schedule:

Altitude: 0'
Winter Entering Air Dry Bulb Temp: 0°F
Temp Rise: 100°F
Output BTU: 712800
Input BTU: 774783
BTUs BASED OFF STANDARD AIR DENSITY

Supply Installation Information:

Gas Inlet Pressure: 7 in. w.c. - 14 in. w.c.
Insurance: No Insurance Requirement (ANSI)
Unit Main Input: 15.6 Amps MCA, 25 Amps MOP, 208 V, 12 AWG Wire Min.
Supply Unit Voltage: 3 phs 208 V 60Hz

Construction Features

Housing constructed of heavy duty G90 galvanized steel • Forward curved centrifugal blower wheel • Vibration isolation • Adjustable drive assemblies • Adjustable motor mount • Ball bearing motors • Heavy duty, pre-lubricated bearings rated for 200,000 hours of operation • Static resistant belts • Service doors on both sides • Horizontal & down discharge • Large intake area ensures low pressure drop across unit • Spring loaded profile plates automatically adjust for any airflow - no manual setting required! • Weatherproof safety disconnect switch • Modular design provides design flexibility • Fully insulated casing

Blower:

25 Inch Plenum Fan for size 3 MOD. Motor integral to Wheel. Max RPM = 1580.

Temp Control:

RTC Solutions • 40-90°F Discharge Temp Control • Field Wired On/Off Start Command

Intake:

Sloped Filtered Intake for Size #3 Modular Heater. 37.25" Wide X 51.625" Long X 35.188" High. Includes 2" MV EZ Kleen Metal Mesh Filter.

Filters:

6x MV EZ Kleen Metal Mesh Filter. 16"x 20"x 2" Used for heater and supply fan intakes. (3412)

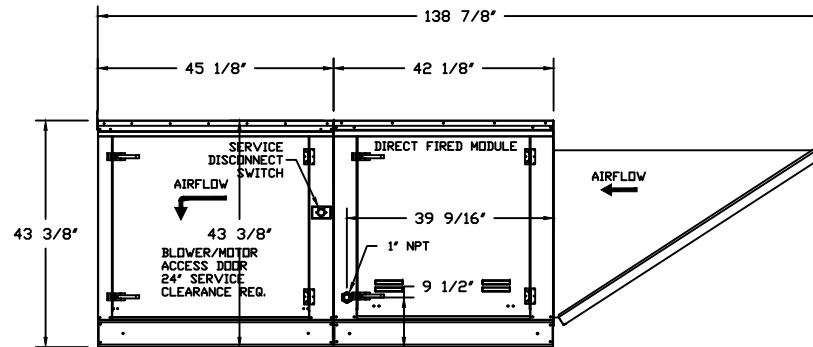
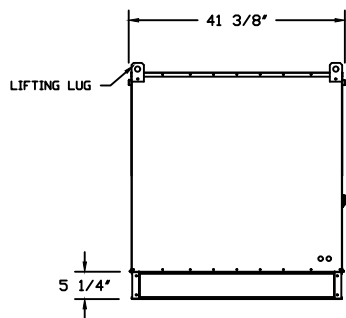
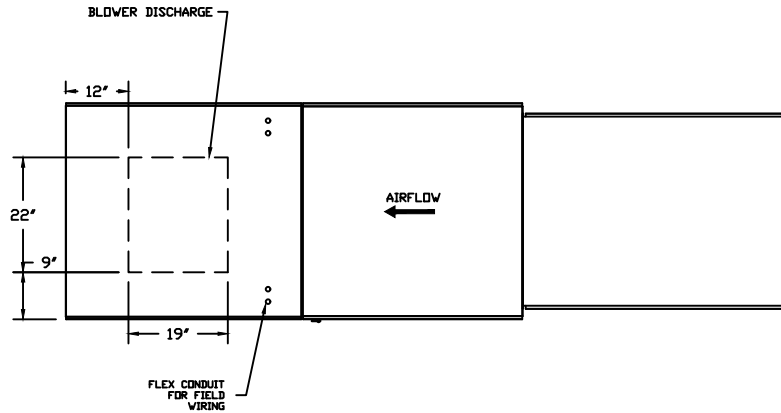
Selected Options:

- Motorized Back Draft Damper 30" X 30" for Size 3 Standard & Modular Heater Units w/Extended Shaft, Standard Galvanized Construction, 3/4" Rear Flange, Low Leakage, NFBUP-S Actuator Included
- Low Fire Start. Allows the burner circuit to energize when the modulation control is in a low fire position.
- Gas Pressure Gauge, 0-35", 2.5" Diameter, 1/4" Thread Size
- Gas Pressure Gauge, -5 to +15 Inches Wc., 2.5" Diameter, 1/4" Thread Size
- ECM Wiring Package and Manual or 0-10 VDC Control for Supply EC Ziehl Fans. RTC Controller

TK3-D.750-25Z DIRECT FIRED HEATER

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 25' DIRECT DRIVE FAN AND 18' BURNER.
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER 30" X 30" FOR SIZE 3 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, NF8UP-S ACTUATOR INCLUDED
5. LOW FIRE START. ALLOWS THE BURNER CIRCUIT TO ENERGIZE WHEN THE MODULATION CONTROL IS IN A LOW FIRE POSITION.
6. GAS PRESSURE GAUGE, 0-35", 2.5" DIAMETER, 1/4" THREAD SIZE
7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE
8. ECM WIRING PACKAGE AND MANUAL OR 0-10 VDC CONTROL FOR SUPPLY EC ZIEHL FANS. RTC CONTROLLER

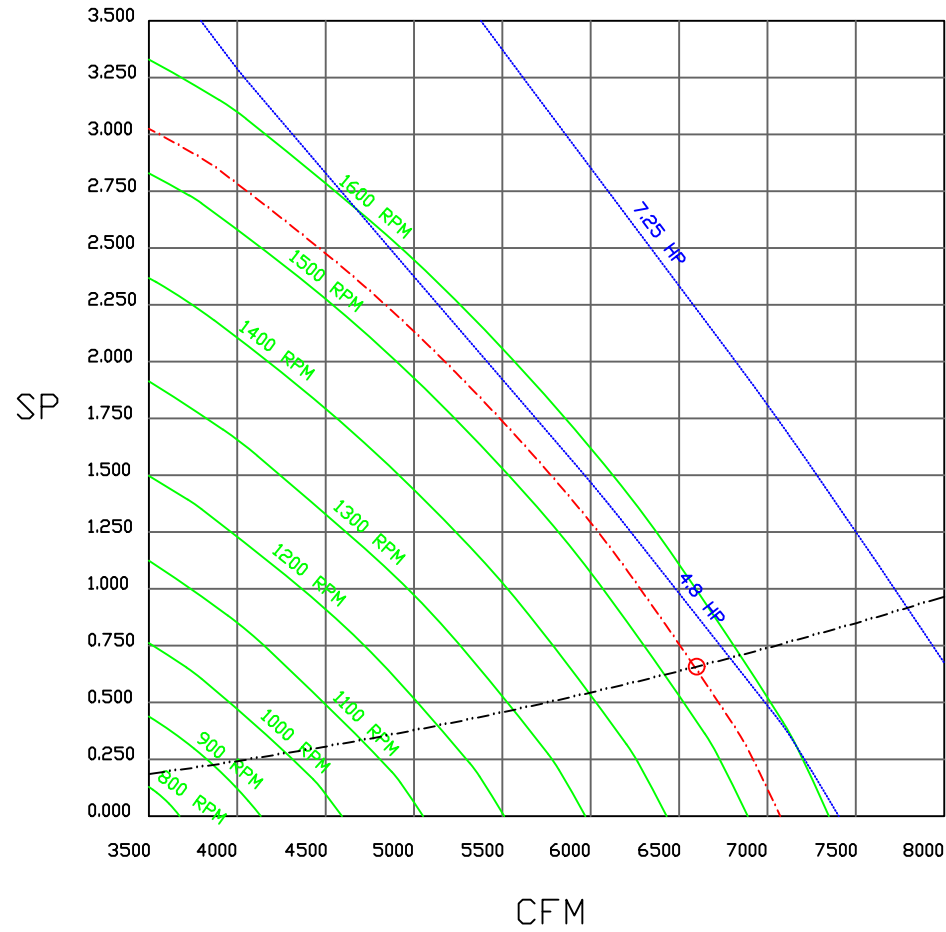
NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE UNLESS OTHERWISE SPECIFIED. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.



  		JOB	
		LOCATION	
		DATE	JOB #
		DWG #	DRAWN BY
		REV.	SCALE 1/4" = 1'-0"

(6600 4.8HP/3PH-208V) - HEATER PERFORMANCE CURVES.

6600 CFM, 0.657 SP @ 1540 RPM and 4.207 BHP at 0 feet and 100 deg F
 * Please note that these curves were adjusted for job specific temperature and altitude.



JOB	
LOCATION	
DATE	JOB #
DWG #	DRAWN BY
REV.	SCALE 3/8" = 1'-0"

Direct Fired Heater Wiring

JOB NAKS Direct Fired Direct Drive MUA

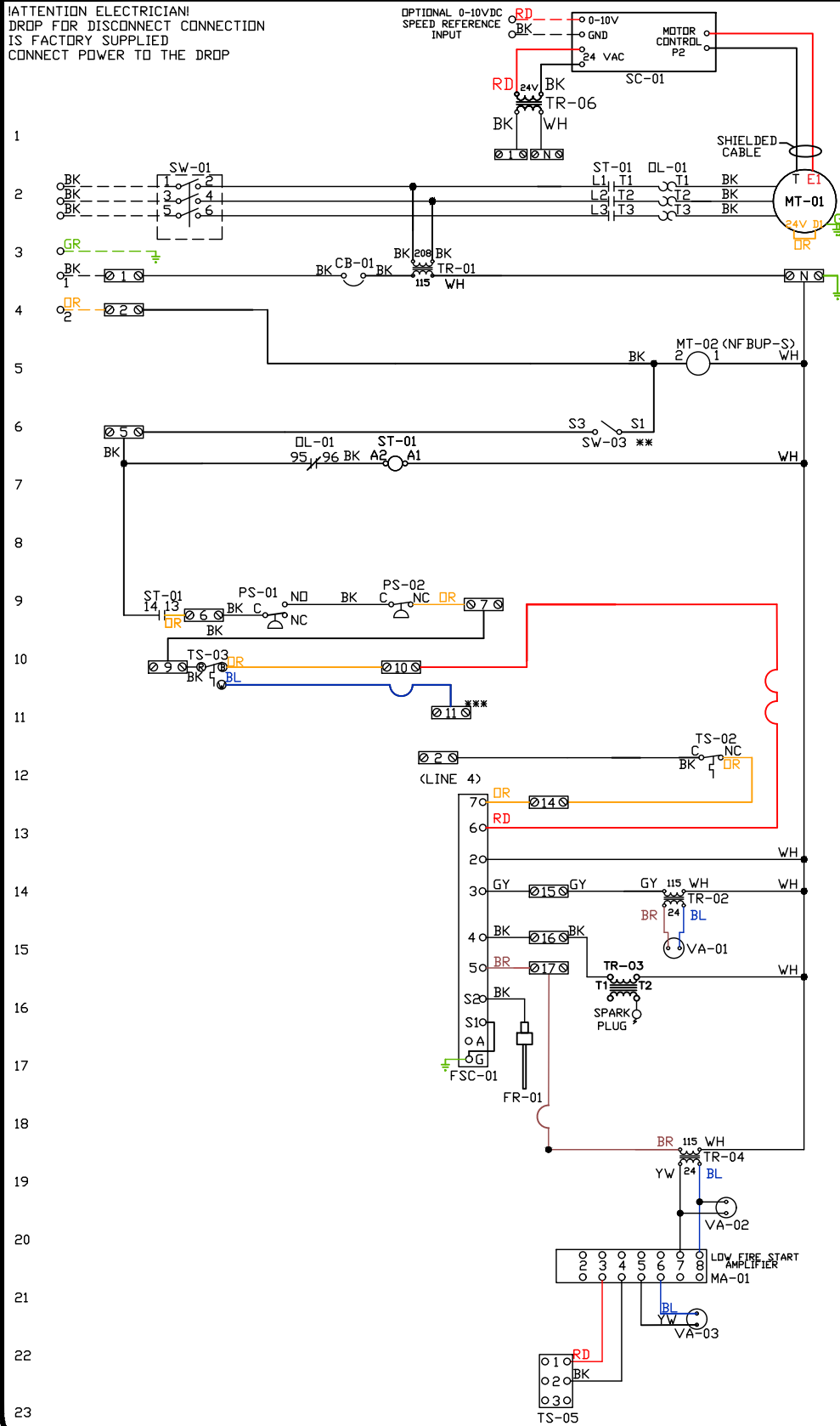
DRAWING NUMBER

SHIP DATE

MODEL TK 1-5 Series Direct Drive ECM

ATTENTION ELECTRICIAN!
DROP FDR DISCONNECT CONNECTION
IS FACTORY SUPPLIED
CONNECT POWER TO THE DROP

OPTIONAL 0-10VDC
SPEED REFERENCE
INPUT



Installed Options
Field Wired Single Switch Control
Motorized Back Draft Damper

Discharge Temp. Control

Label	Component Identification Description	Location
CB-01	Circuit breaker (2amp)	[3]
FR-01	Flame rod	[16]
FSC-01	Fireeye FSC	[11-14]
MA-01	Modulating amplifier	[19]
MT-01	Supply motor	[2]
MT-02	Damper motor	[5]
DL-01	Supply motor overload	[2X7][9]
PS-01	Low Air-Flow Switch	[9]
PS-02	High Air-Flow Switch	[9]

SC-01	RTC-FSC-1	[1]
ST-01	Supply motor contactor	[2X7][9]
SW-01	Main disconnect switch	[2]
SW-03	Damper end limit switch	[4]
TR-01	Power transformer(200v)	[2]
TR-02	Power transformer(20va)	[12]
TR-03	Ignition transformer	[14]
TR-04	Power transformer(20va)	[17]
TR-06	24VAC 20VA Transformer	[1]
TS-02	High temp limit switch	[10]
TS-03	Intake Air Sensor	[10]
TS-05	Discharge Air Sensor	[21]

MOTOR INFO
SUPPLY: 4.8HP-208V-3P-11.5FLA
CONTACTOR: 100-CJ6D10
OVERLOAD: 193-TIAC12

ELECTRICAL INFORMATION
MOTOR/CTRL CIRCUIT MCA: 15.6A
MOTOR/CTRL CIRCUIT MDP: 25A

NOTES
--- DENOTES FIELD WIRING
— DENOTES INTERNAL WIRING

** TERMINALS S4 AND S6 USED ON
NF & AF SERIES ACTUATORS
*** TERMINAL 11 PROVIDES COOLING
CONNECTION

WIRE COLOR	SOCKET STYLE
BK-BLACK	NO 4 1 3
BL-BLUE	NC 2 1 1
GR - GREEN	COM 8 7 7
BR - BROWN	COM 6 1 5
GY - GRAY	
RD - RED	
WH - WHITE	
PK - PINK	
DR - DRANGE	
PR - PURPLE	

Installation Wiring

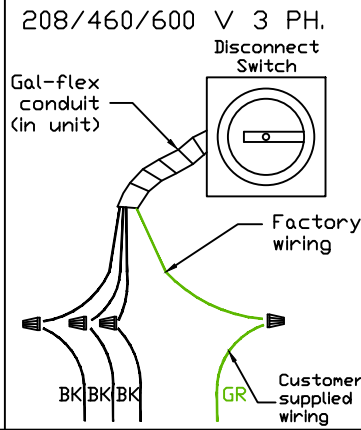
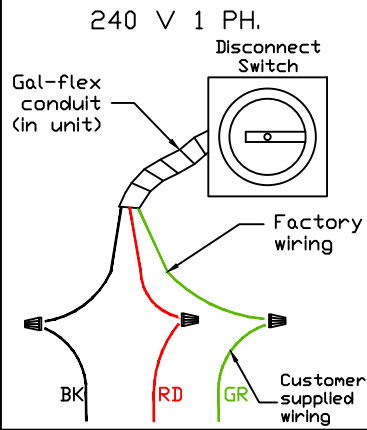
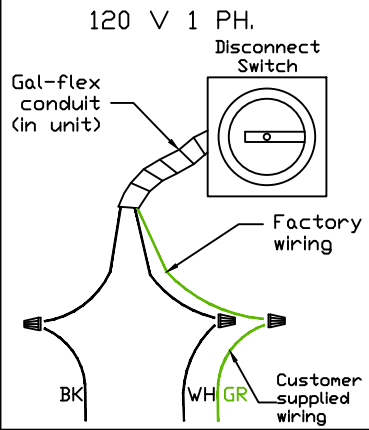
JOB NAKS Direct Fired MUA

DRAWING NUMBER

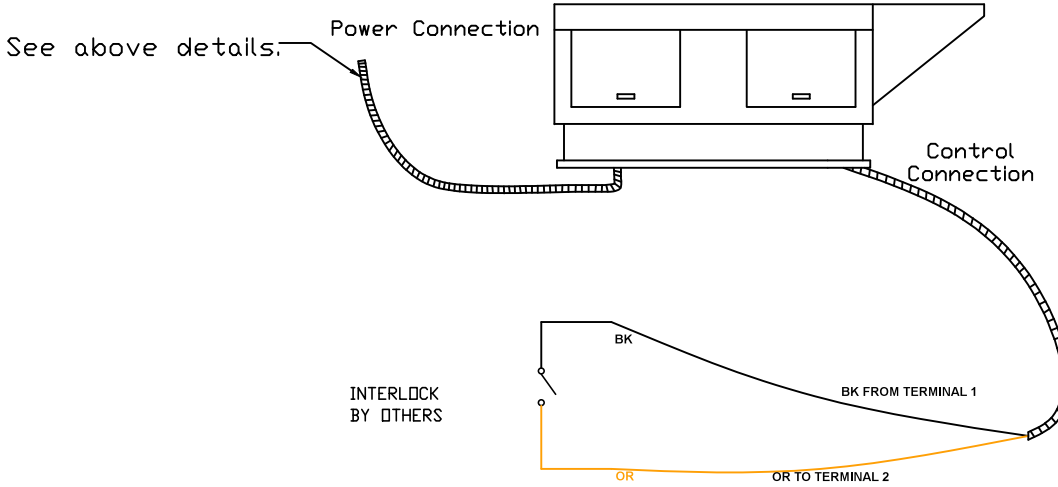
SHIP DATE

MODEL TK 1-5 Series

Installed Options



Field Wired On/Off Switch



NOTES

- WIRE COLOR
- | | |
|-------------|-------------|
| BK - BLACK | YW - YELLOW |
| BL - BLUE | GR - GREEN |
| BR - BROWN | GY - GRAY |
| OR - ORANGE | PR - PURPLE |
| RD - RED | PK - PINK |
| WH - WHITE | |