

Gas-Fired Tempered Make-Up Air Unit

Model:

TK1-P1H-FF

1-Phase, 208V, 1.50 HP, Belt driven with Motorized Damper and 10" Blower. MAX 2500 CFM's





TK1-250 Direct Fired (615 lbs.)

Supply Motor:

Model 00158OT1BAO56-S40PK, 1.500 HP, 1 Phase, 208 V, 60Hz, 7.5 FLA, ODP (Open Drip Proof)

Supply Motor Pulleys:

<u>Part Type</u>	<u>Qty</u>	<u>Browning #</u>	<u>Turns Out</u>
Blower Pulley	1	AK46 x 3/4	
Motor Pulley	1	1VL40 x 5/8	2.5

Burner:

Min Output BTU: 18,000 BTU/Hr
Max Output BTU: 275,000 BTU/Hr
Size: 6" long
Gas Type: Natural

Supply Performance:

Volume: 2500 cfm Volume Range: 1000-2500 cfm
RPM: 1236
TS: 3236 ft/min
SP: 0.620" w.g.
0.500" Ext. + 0.071" Int. + 0.049" Opt.
BHP: 1.364

Heating Schedule:

Altitude: 0'
Winter Entering Air Dry Bulb Temp: 0°F
Temp Rise: 100°F
Output BTU: 270000
Input BTU: 293478
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: 10.6 Amps MCA, 15 Amps MOP, 208 V, 14 AWG Wire Min.
Supply Unit Voltage: 1 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:

10" forward curved, centrifugal blower. Permanently lubricated ball bearings. Galvanized finish. 3/4" x 19" Shaft. 0-4000 CFM. 2500 max. RPM. Used in heated and non-heated supply fans.

Temp Control:

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

Intake:

Sloped Filtered Intake for Size #1 Modular Heater. 21.813" Wide x 44.375" Long x 23.375" High. Includes 2" MV EZ Kleen Metal Mesh Filters.

Filters:

3x MV EZ Kleen Metal Mesh Filter. 16"x 20"x 2" Used for heater and supply fan intakes. (3412)

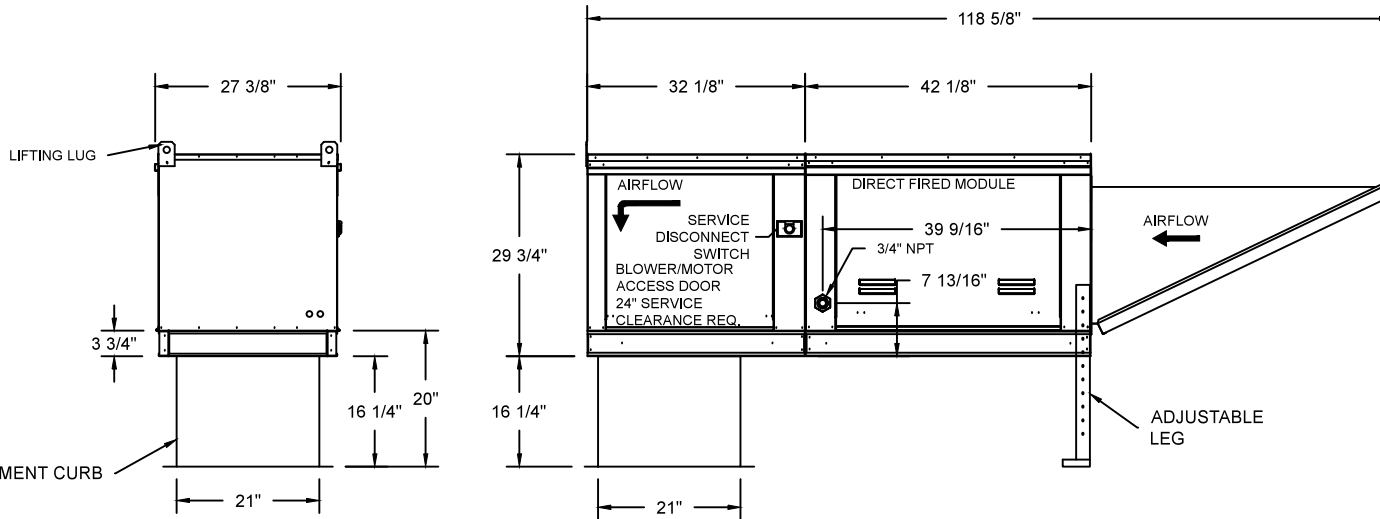
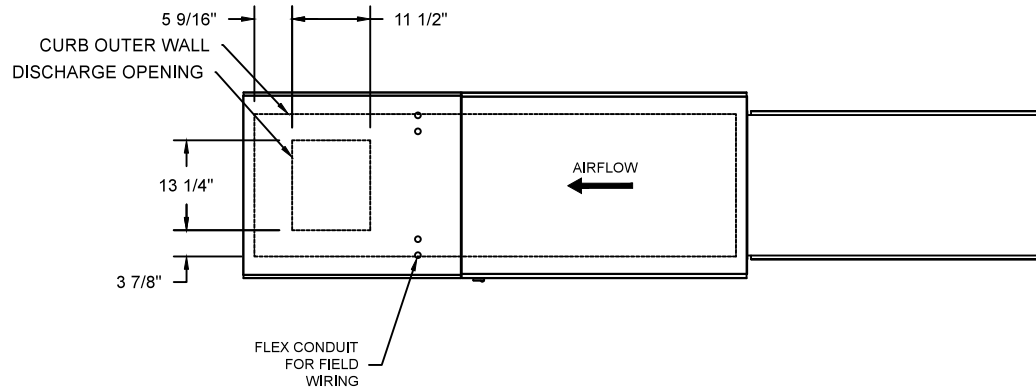
Selected Options:

- Motorized Back Draft Damper 16" X 18" for Size 1 Standard & Modular Heater Units w/Extended Shaft, Standard Galvanized Construction, 3/4" Rear Flange, Low Leakage, TFB120S 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

TK1 DIRECT FIRED HEATER

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 10" BLOWER
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER W/ STANDARD GALVANIZED CONSTRUCTION, LOW LEAKAGE, TFB120S ACTUATOR 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"
7. GAS PRESSURE GAUGE, -5 TO +15 INCHES WC.

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.



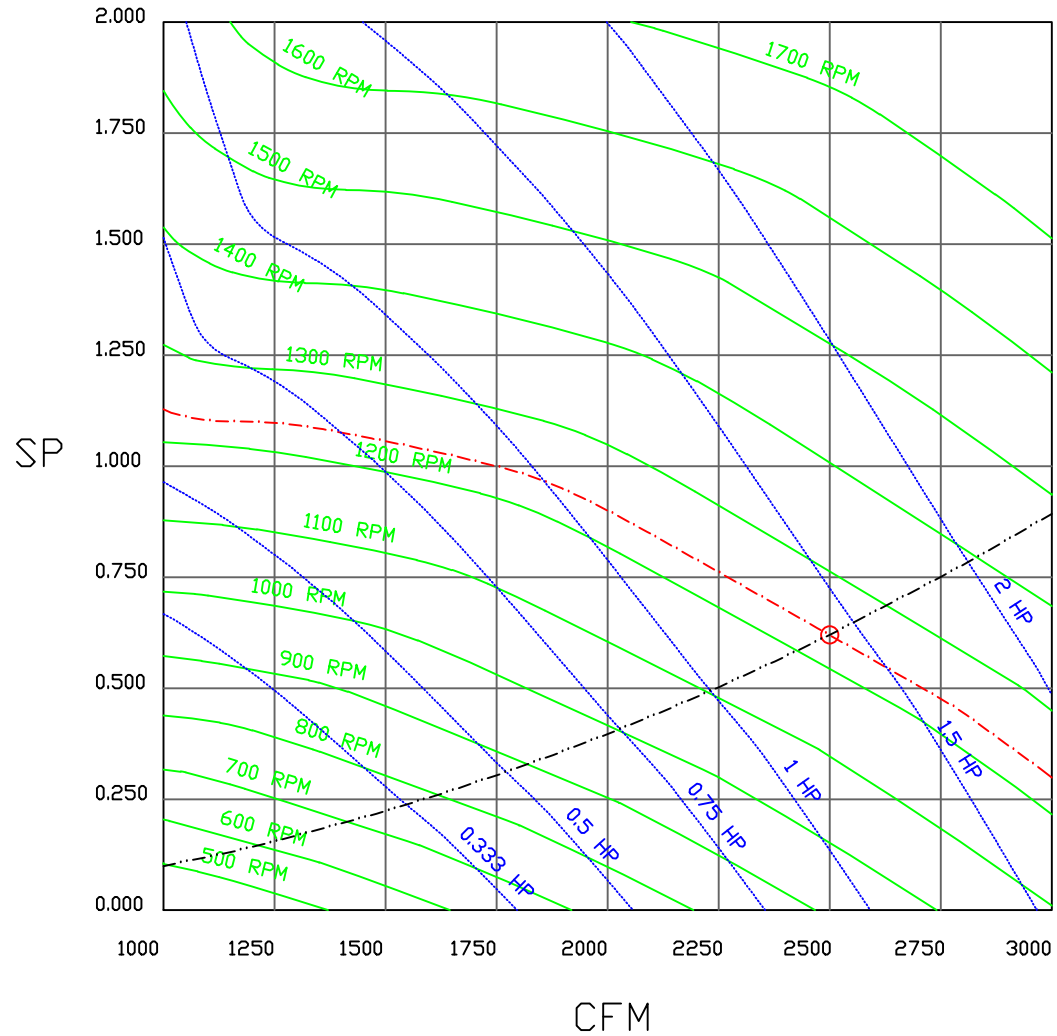
ROOF OPENING 2" SMALLER THAN CURB DIMENSION.



JOB	
LOCATION	
DATE 08/01/2018	JOB #
DWG # TK1	DRAWN BY
REV.	SCALE

(2500 1.5HP/1PH-208V) - HEATER PERFORMANCE CURVES.

2500 CFM, 0.62 SP @ 1236 RPM and 1.364 BHP at 0 feet and 100 deg F
 * Please note that these curves were adjusted for job specific temperature and altitude.



	naKS NORTH AMERICAN KITCHEN SOLUTIONS INCORPORATED		JOB LOCATION
	DATE 8/3/2018	JOB #	DRAWN BY
	DWG #	SCALE 3/8" = 1'-0"	REV.
	REV.	SCALE 3/8" = 1'-0"	REV.
	REV.	SCALE 3/8" = 1'-0"	REV.

Direct Fired Heater Wiring

JOB NAKS Direct Fired MUA

DRAWING NUMBER

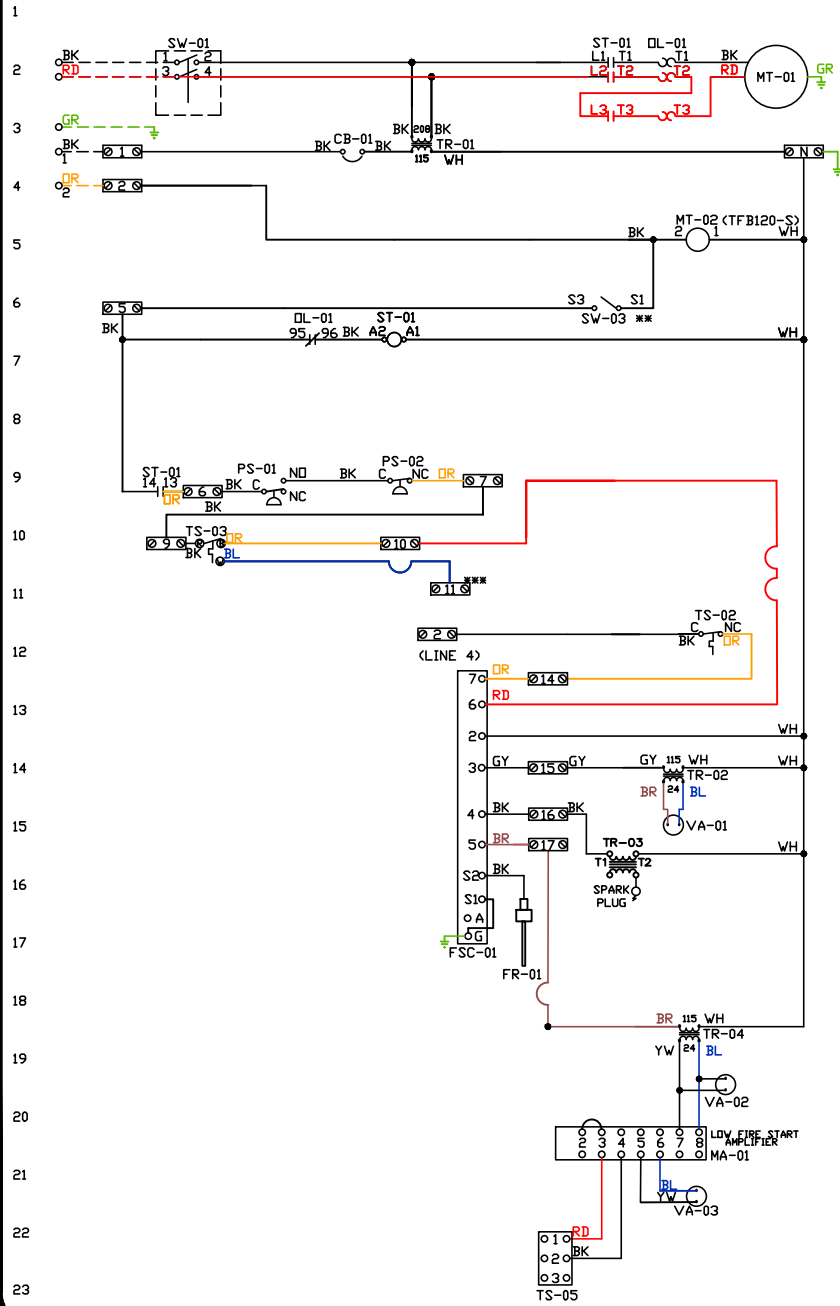
SHIP DATE

MODEL TK 1-5 Series

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

Installed Options
Field Wired Single Switch Control
Motorized Back Draft Damper

Discharge Temp. Control



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

ST-01	Supply motor contactor	[2X7]9
SW-01	Main disconnect switch	[2]
SW-03	Damper end unit switch	[4]
TR-01	Power transformer(200v)	[3]
TR-02	Power transformer(20v)	[14]
TR-03	Ignition transformer	[14]
TR-04	Power transformer(20v)	[17]
TS-02	High temp limit switch	[10]
TS-03	Intake Air Sensor	[10]
TS-05	Discharge Air Sensor	[21]
VA-01	Pilot gas valve	[13]
VA-02	Main gas valve	[18]
VA-03	Modulating gas valve	[20]

MOTOR INFO	
SUPPLY	15HP-208V-1P-7.5FLA
CONTRACTOR	100-K09D10
OVERLOAD	193-KB75

ELECTRICAL INFORMATION	
MOTOR/CTRL CIRCUIT MCA:	10.6A
MOTOR/CTRL CIRCUIT MDP:	15A

NOTES
 - - - - DENOTES FIELD WIRING
 _____ DENOTES INTERNAL WIRING

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

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

SOCKET STYLE FOLLOW RELAY

NO	[1]
NC	[2]
COM	[7]
CD	[3]

Installation Wiring

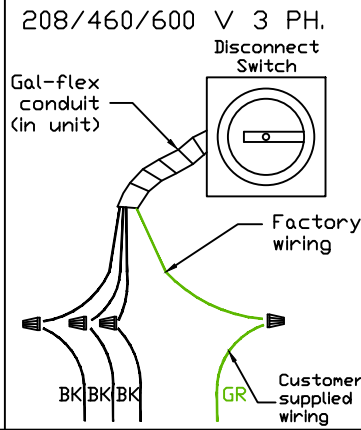
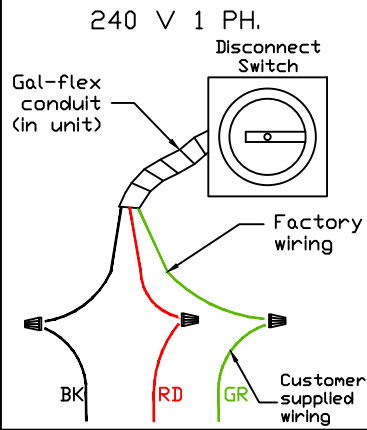
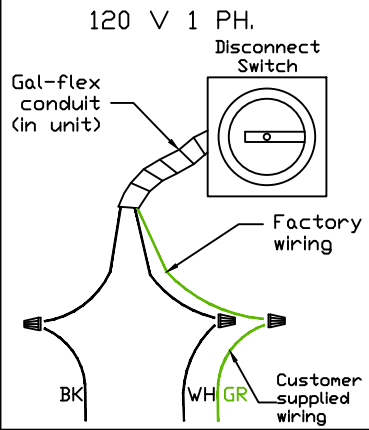
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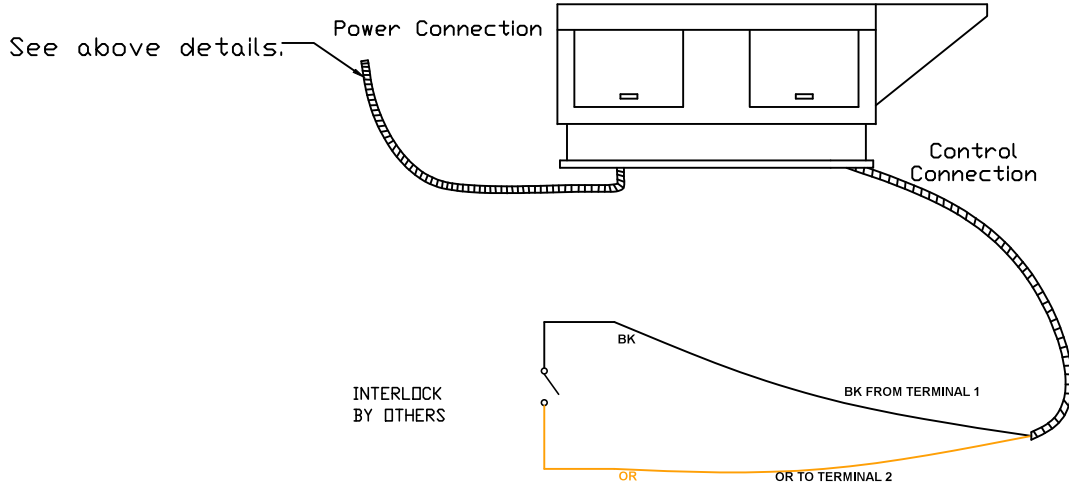
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MODEL TK 1-5 Series

Installed Options



Field Wired On/Off Switch



NOTES

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