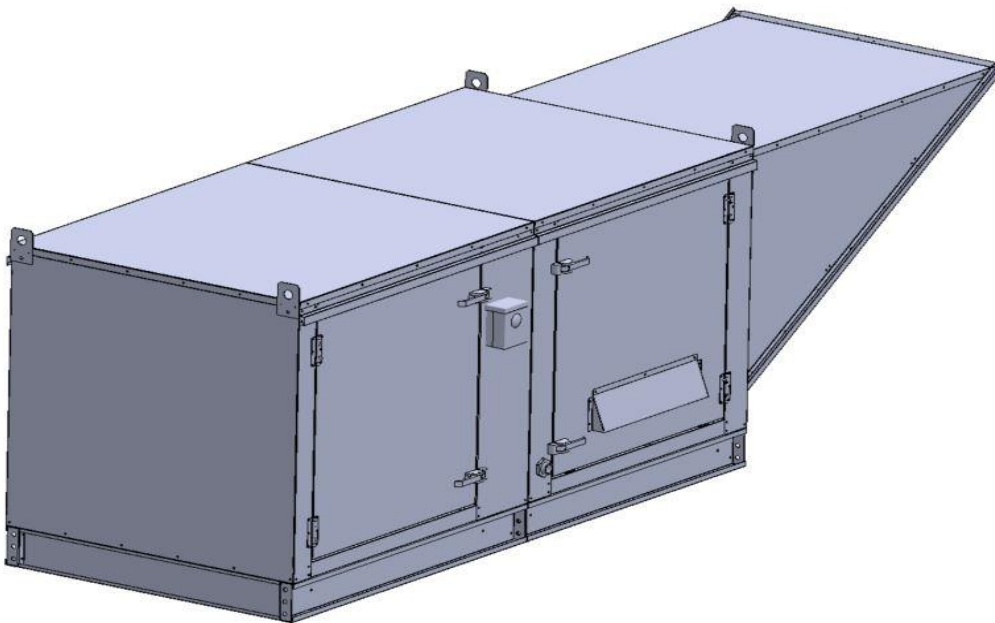


## Gas-Fired Tempered Make-Up Air Unit

Model:

TK3-3PH-FF

3-Phase, 230V, 5.00 HP, Belt driven with Motorized Damper and 18" Blower. MAX 7800 CFM's





TK3-750 Direct Fired (1008 lbs.)

**Supply Motor:**

Model 00318OT3E56Z-48PP, 3.000 HP, 3 Phase, 230 V, 60Hz, 7.9 FLA, ODP, Premium (E-Plus3) Eff.

**Supply Motor Pulleys:**

<u>Part Type</u>	<u>Qty</u>	<u>Browning #</u>	<u>Turns Out</u>
Belt	2	BX56	
Blower Pulley	1	2BK80H	
Bushing	1	H-1 3/16	
Motor Pulley	1	2VP42 x 7/8	4.0

**Burner:**

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

**Supply Performance:**

Volume: 6200 cfm Volume Range: 3500-6200 cfm  
RPM: 750  
TS: 3534 ft/min  
SP: 0.639" w.g.  
0.500" Ext. + 0.109" Int. + 0.030" Opt.  
BHP: 2.745

**Heating Schedule:**

Altitude: 0'  
Winter Entering Air Dry Bulb Temp: 0°F  
Temp Rise: 100°F  
Output BTU: 669600  
Input BTU: 727826  
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: 11.0 Amps MCA, 15 Amps MOP, 230 V, 14 AWG Wire Min.  
Supply Unit Voltage: 3 phs 230 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:**

18" forward curved, centrifugal blower. Pillow Block ball bearings. Galvanized finish. 4000-12000 CFM. 1-3/16" x 34" Shaft. 1450 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 #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)

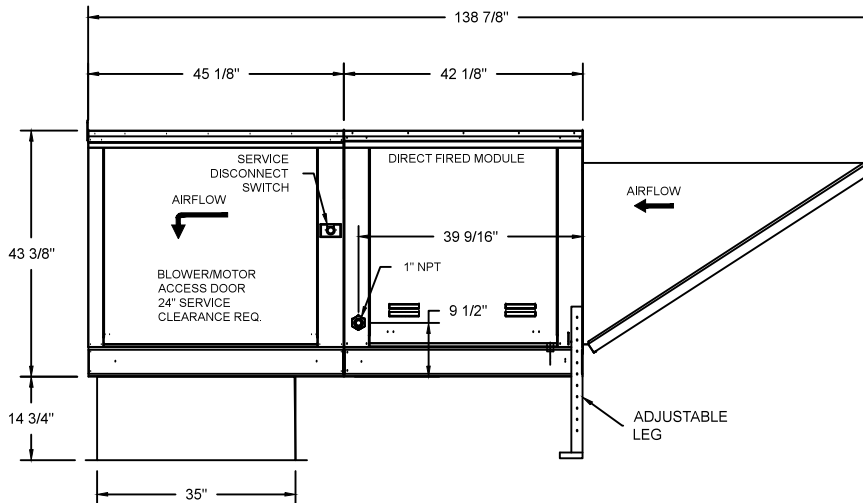
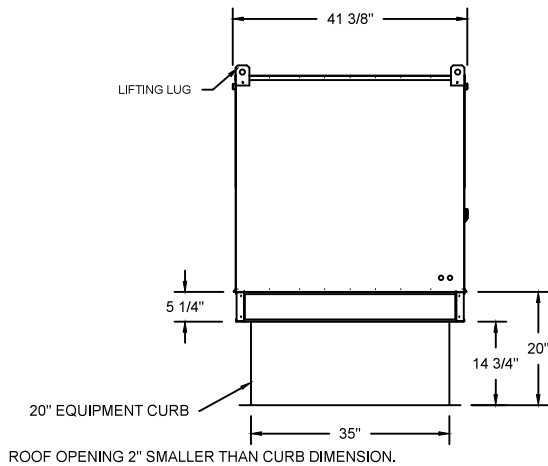
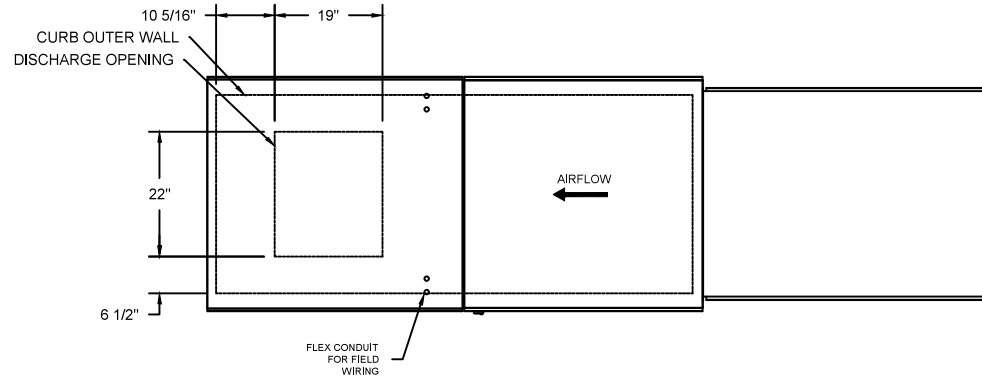
**Selected Options:**

- 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

TK3 DIRECT FIRED HEATER

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 18" BLOWER AND 18" BURNER.
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER W/STANDARD GALVANIZED CONSTRUCTION, LOW LEAKAGE, NFBUP-S-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.

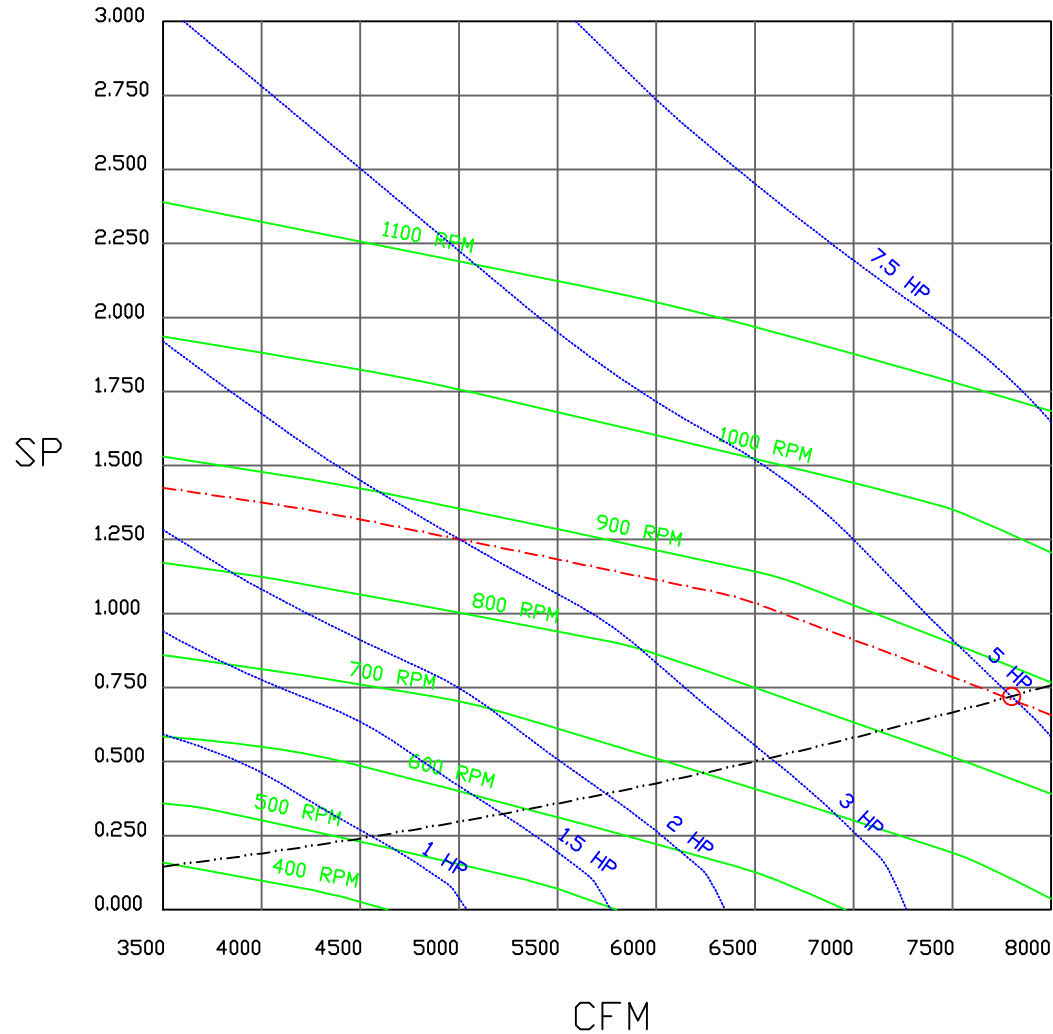


Logos for ETL, Intertek, and NAKS North American Kitchen Solutions Incorporated.

JOB	
LOCATION	
DATE 08/01/2018	JOB #
DWG # TK3	DRAWN BY
REV.	SCALE

(7800 5HP/3PH-230V) - HEATER PERFORMANCE CURVES.

7800 CFM, 0.72 SP @ 872 RPM and 4.781 BHP at 0 feet and 98 deg F  
 \* Please note that these curves were adjusted for job specific temperature and altitude.



			JOB	
			LOCATION	
	DATE	8/3/2018	JOB #	
	DWG #		DRAWN BY	
	REV.		SCALE 3/8" = 1'-0"	

# Direct Fired Heater Wiring

JOB NAKS Direct Fired MUA

DRAWING NUMBER

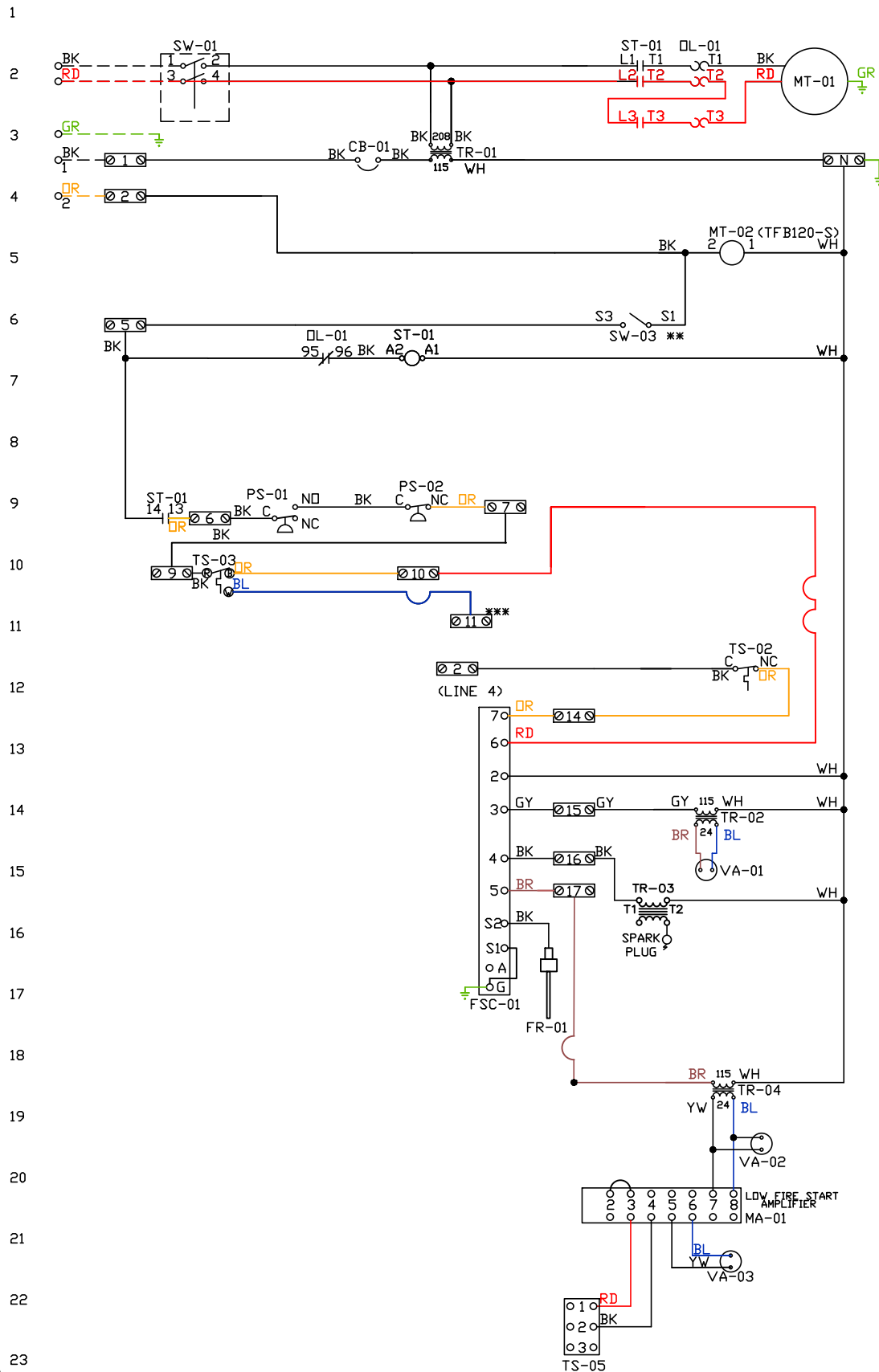
SHIP DATE

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



Label	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	[2][7]
PS-01	Low AirFlow Switch	[9]
PS-02	High AirFlow Switch	[9]
ST-01	Supply motor contactor	[2][7][9]
SW-01	Main disconnect switch	[2]
SW-03	Damper end limit switch	[4]
TR-01	Power transformer(200v)	[3]
TR-02	Power transformer(20va)	[2]
TR-03	Ignition transformer	[14]
TR-04	Power transformer(20va)	[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	5HP-230V-3P-13.6FLA
CONTACTOR	100-CJ6D10
OVERLOAD	193-TIAC16

ELECTRICAL INFORMATION  
 MOTOR/CTRL CIRCUIT MCA: 18.1A  
 MOTOR/CTRL CIRCUIT MDP: 30A

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	ND 4 3
BL-BLUE	NC 2 1
BR - BROWN	CDL 8 7
DR - ORANGE	CDM 6 5
GY - GRAY	
GR - GREEN	
WH - WHITE	
PK - PINK	
PR - PURPLE	

# Installation Wiring

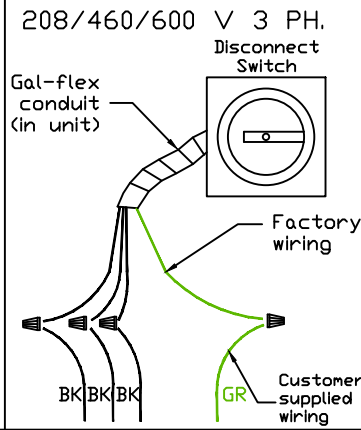
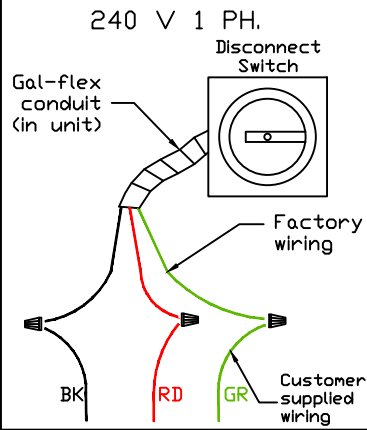
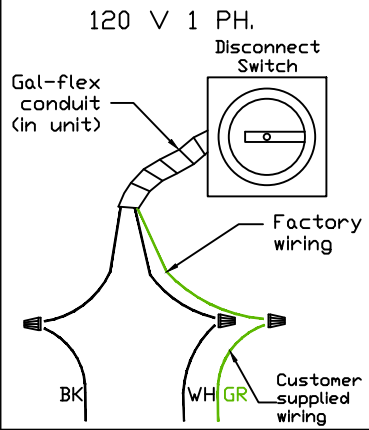
JOB NAKS Direct Fired MUA

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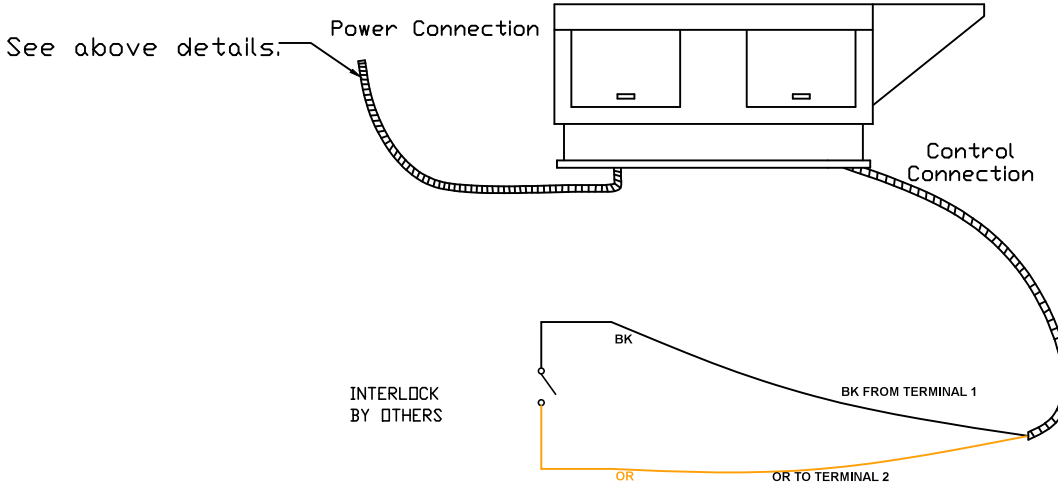
SHIP DATE

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