

Gas-Fired Tempered Make-Up Air Unit

Model:

TK5-3PH-FF

3-Phase, 460V, 7.50 HP, Belt driven with Motorized Damper and 20" Blower. MAX 14,300 CFM's





TK5-2000 Direct Fired (2079 lbs.)

Supply Motor:

Model DTP7/54, 7.500 HP, 3 Phase, 460 V, 60Hz, 9.6 FLA, ODP, Premium (E-Plus3) Eff.

Supply Motor Pulleys:

<u>Part Type</u>	<u>Qty</u>	<u>Browning #</u>	<u>Turns Out</u>
Blower Pulley	1	2B5V154	
Bushing	1	B-2 3/16	
Motor Pulley	1	2VP60 x 1-3/8	3.5

Burner:

Min Output BTU: 73,333 BTU/Hr
Max Output BTU: 2,200,000 BTU/Hr
Size: 48" long
Gas Type: Natural

Supply Performance:

Volume: 14300 cfm Volume Range: 10000-14300 cfm
RPM: 582
TS: 3809 ft/min
SP: 0.660" w.g.
0.500" Ext. + 0.123" Int. + 0.037" Opt.
BHP: 7.15

Heating Schedule:

Altitude: 0'
Winter Entering Air Dry Bulb Temp: 0°F
Temp Rise: 100°F
Output BTU: 1544400
Input BTU: 1678696
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: 12.6 Amps MCA, 20 Amps MOP, 460 V, 14 AWG Wire Min.
Supply Unit Voltage: 3 phs 460 V 60Hz

Blower:

25" forward curved, centrifugal blower. Permanently lubricated pillow block ball bearings. Enamel finish. 10000-25000 CFM. 2 3/16" x 54-1/2" Shaft. 1000 maximum RPM. Heavy duty angle iron frame. 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 #5 Modular Heater. 55.81" Wide X 70.05" Long X 51.00" High. Includes 2" MV EZ Kleen Metal Mesh Filter.

Filters:

8x MV EZ Kleen Metal Mesh Filter. 20"x 25"x 2" Used for heater and supply fan intakes. (3416)

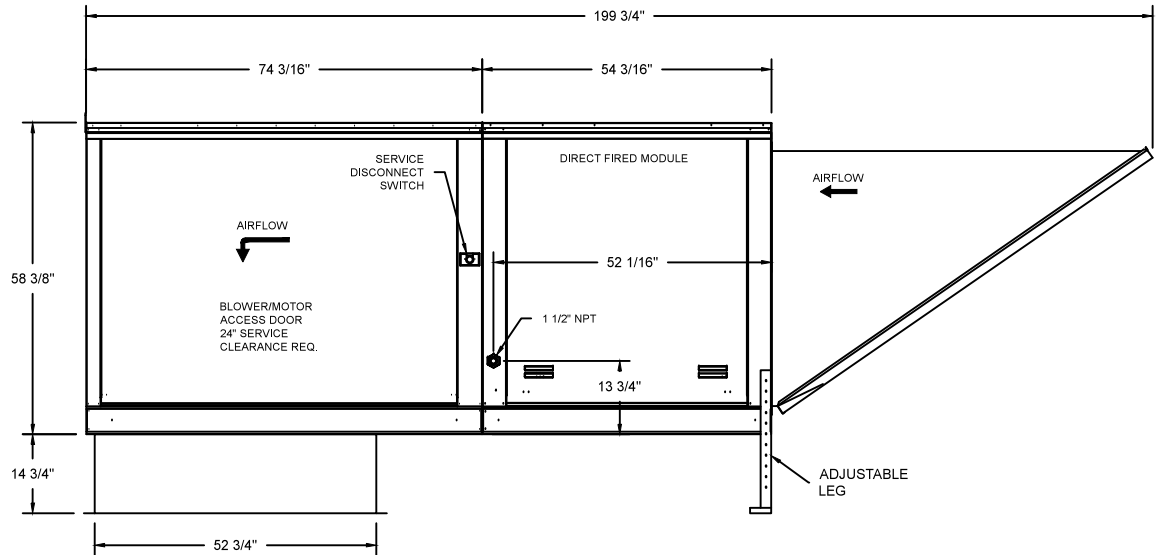
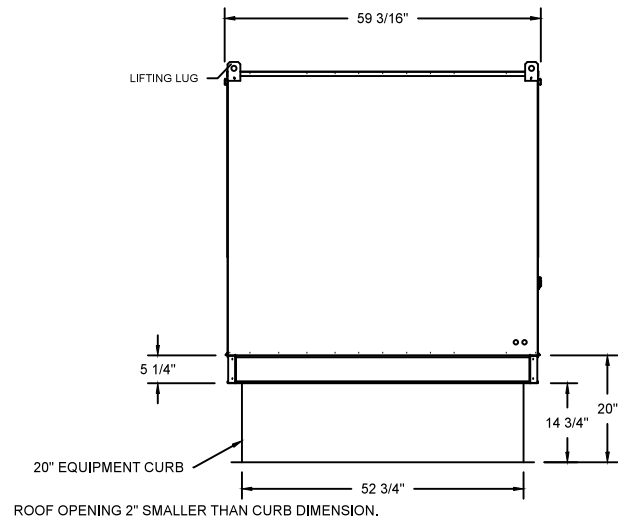
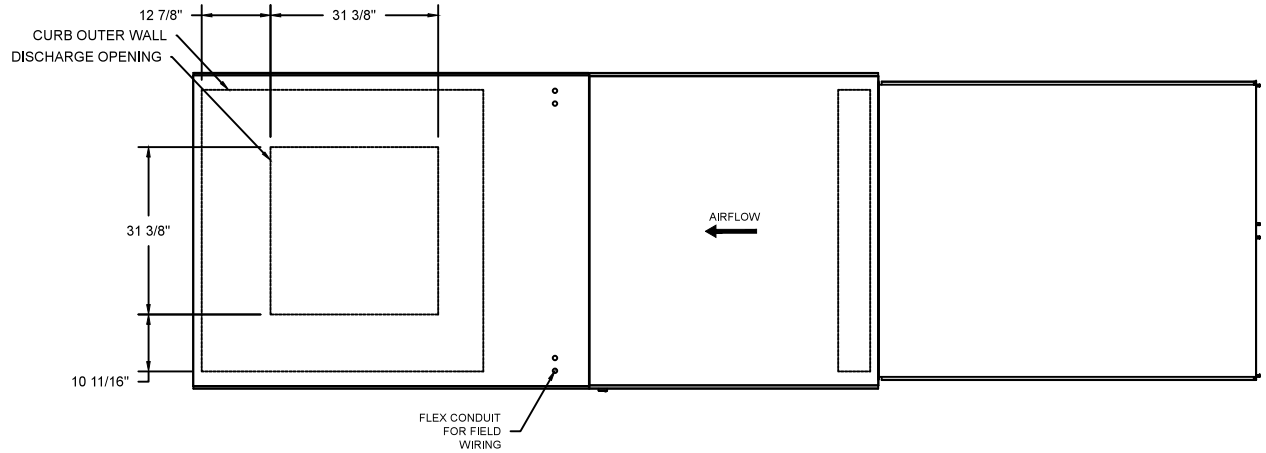
Selected Options:

- Motorized Back Draft Damper 43" X 43" for Size 5 Standard & Modular Heater Units w/Extended Shaft, Standard Galvanized Construction, 3/4" Rear Flange, Low Leakage, NFBUPS 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

TK5 DIRECT FIRED HEATER

1. DIRECT GAS FIRED HEATED MAKE UP AIR UNIT WITH 25" BLOWER AND 48" BURNER
2. INTAKE HOOD WITH EZ FILTERS
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT
4. MOTORIZED BACK DRAFT DAMPER 43" X 43" FOR SIZE 5 STANDARD & MODULAR HEATER UNITS W/EXTENDED SHAFT, STANDARD GALVANIZED CONSTRUCTION, 3/4" REAR FLANGE, LOW LEAKAGE, NFBUPS 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, -5 TO +15 INCHES WC., 2.5" DIAMETER, 1/4" THREAD SIZE
7. GAS PRESSURE GAUGE, 0-5#, 2.5" DIAMETER, 1/4" THREAD SIZE

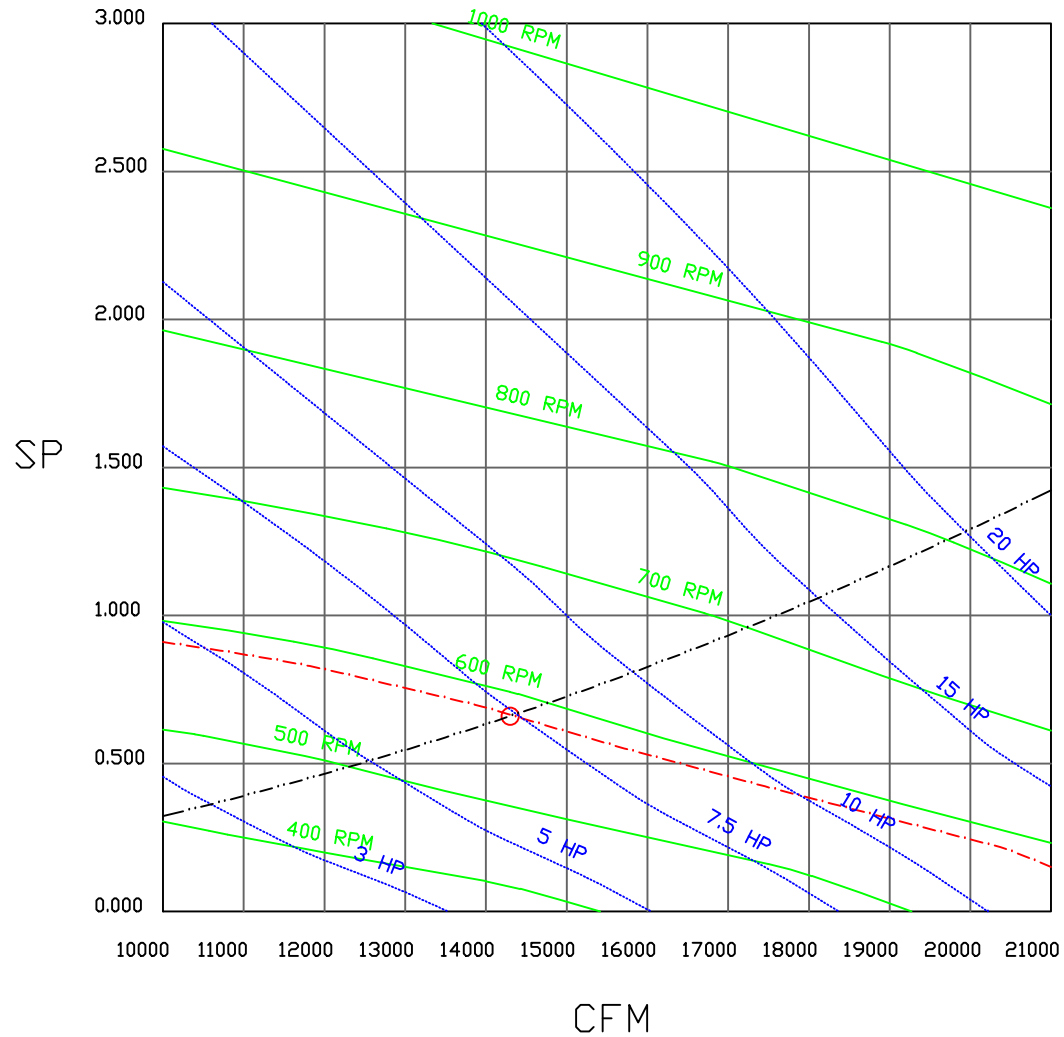
NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE UNLESS OTHERWISE SPECIFIED. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF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



	NORTH AMERICAN KITCHEN SOLUTIONS INCORPORATED	JOB	
		LOCATION	
		DATE 08/01/2018	JOB #
		DWG # TK5	DRAWN BY
		REV.	SCALE

(14300 7.5HP/3PH-460V) - HEATER PERFORMANCE CURVES.

14300 CFM, 0.66 SP @ 582 RPM and 7.15 BHP at 0 feet and 100 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

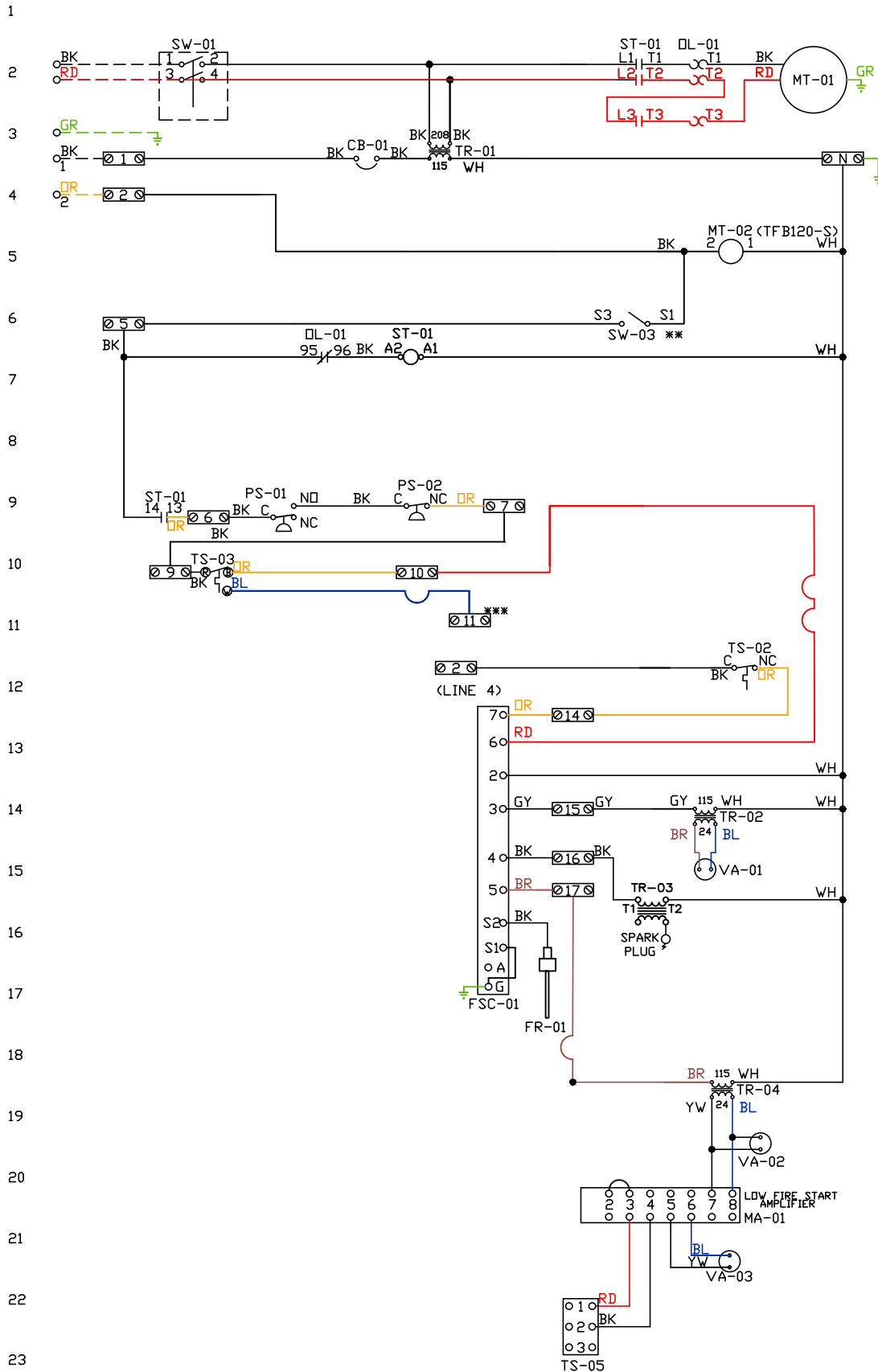
SHIP DATE

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	7.5HP-460V-3P-9.6FLA
CONTACTOR:	100-K12D10
OVERLOAD:	193-KC10

ELECTRICAL INFORMATION
 MOTOR/CTRL CIRCUIT MCA: 12.6A
 MOTOR/CTRL CIRCUIT MDP: 20A

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

Installation Wiring

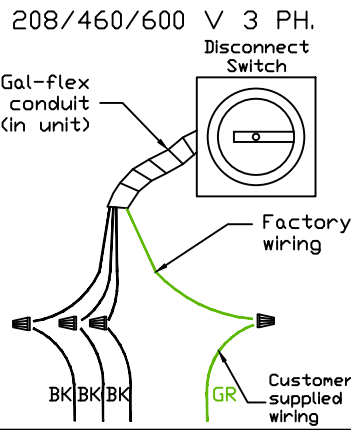
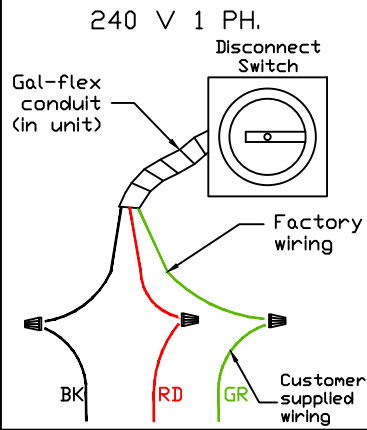
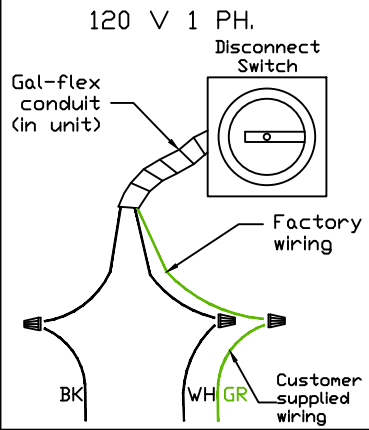
JOB *NAKS Direct Fired MUA*

DRAWING NUMBER

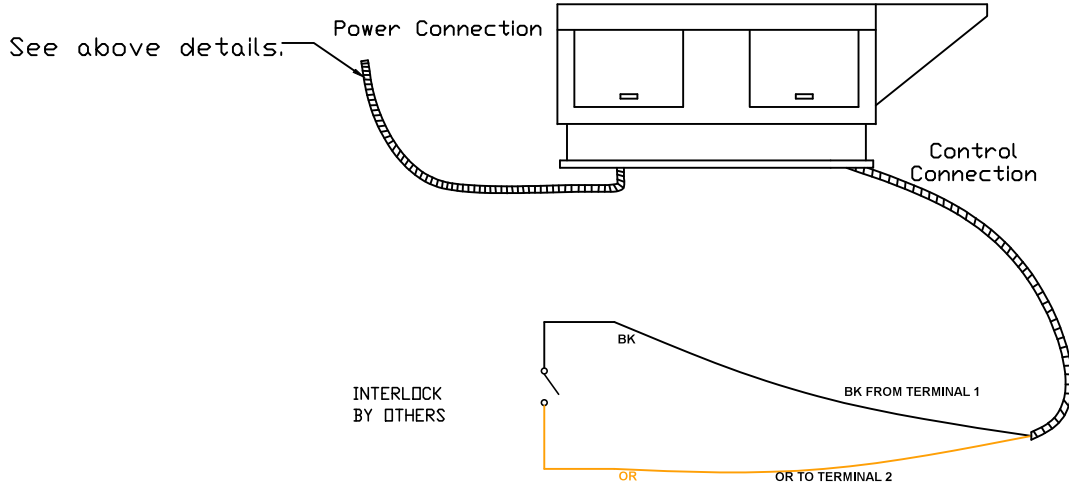
SHIP DATE

MODEL **TK 1-5 Series**

Installed Options



Field Wired On/Off Switch



NOTES

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