



Order # 3710407 - NAKS DD TK-RE Utility Sets

Fan #5 TK-RE15DD (248 lbs.)

Tag: 2000 1.5hp/3ph-VFD

Direct Drive Upblast Restaurant-Duty Utility Set with a 15.750" Wheel. Includes interlocked disconnect safety switch.

Exhaust Motor:

Model DTP1/54, 1.500 HP, 3 Phs, 208 V, 60Hz, 4.4 FLA, ODP, Premium (E-Plus3) Eff.

Exhaust Performance:

Volume: 2000 cfm

RPM: 1604

TS: 6614 ft/min

SP: 1.000" w.g.

BHP: 1.062

Discharge Velocity: 1469 FPM

Altitude: 0'

Ambient Temp: 70°F

Exhaust Installation Information:

Unit Main Input: 5.5 Amps MCA, 15 Amps MOP, 208 V, 14 AWG Wire Min.

Exhaust Unit Voltage: 3 phs 208 V 60Hz

Selected Options:

- VAV (Variable-Air-Volume) Wiring Package for Commercial Fans. Manual Speed Control Variable Frequency Drive Included
- Exhaust Variable Frequency Drive - 1-1/2 HP Max., 200/240 V, Single or Three Phase Input, 6.0 A Max., NEMA 1 Enclosure, (Default is Shipped Loose for Field Installation) PART NEEDS PROGRAMMING
- VFD factory mounted and wired in unit control vestibule.
- VFD/ Line Reactor Mounting Plate for CASRE15DD.
- Grease Cup for Utility Sets. Option for Utility Sets.

EXHAUST FAN INFORMATION

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SDNES
1	2000 1.5hp/3ph-VFD	TK-RE15DD	2000	1.000	1604	1.500	1.0620	3	208	4.4	1469 FPM	248	23

FAN OPTIONS

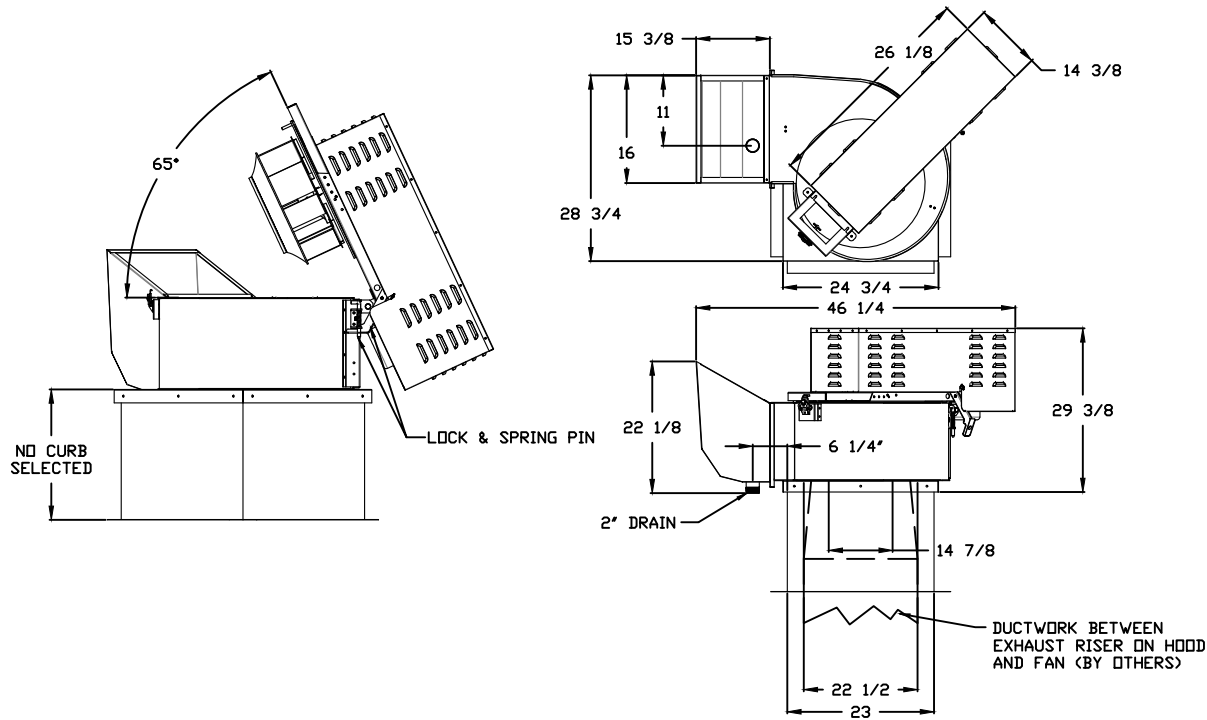
FAN UNIT NO.	TAG	OPTION (Qty. - Desc.)
1	2000 1.5hp/3ph-VFD	1 - VAV Package w/ Manual Control (VFD Included)
		1 - VFD factory mounted and wired in Exhaust Fan.
		1 - VFD Mounting Bracket for TK-RE15DD.
		1 - Utility Set Grease Cup

FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST		
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT
1	2000 1.5hp/3ph-VFD	YES		

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

(2000 1.5HP/3PH-VFD) - TK-RE15DD EXHAUST FAN



FEATURES:

- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL762 AND ULC-S645
- HIGH HEAT OPERATION DIRECT DRIVE 500°F (149°C)
- HIGH HEAT OPERATION BELT DRIVE 500°F (260°C)
- HEAT SLINGER
- GREASE CLASSIFICATION TESTING
- TILT OUT WHEEL
- LOCKING PIN FOR POWER PACK
- MOTOR WEATHER COVER
- INTERLOCKED DISCONNECT SWITCH

NORMAL TEMPERATURE TEST DIRECT DRIVE
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST BELT & DIRECT DRIVE
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

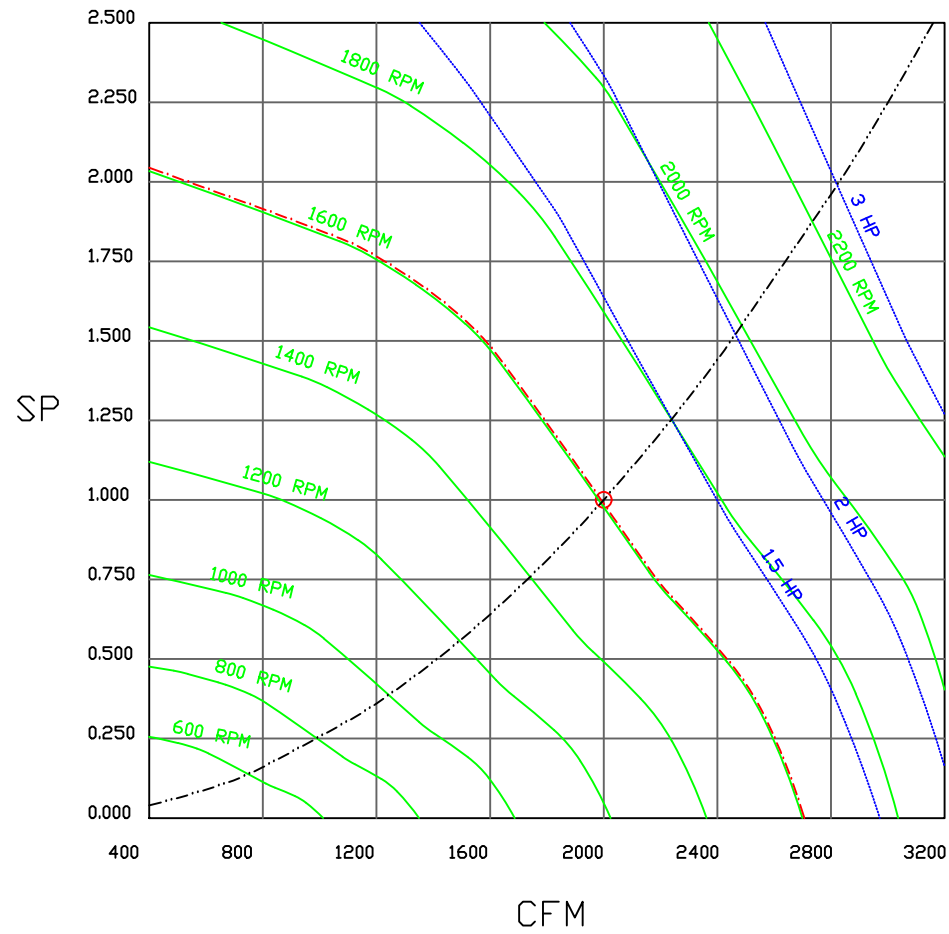
- VAV PACKAGE W/ MANUAL CONTROL (VFD INCLUDED).
- VFD FACTORY MOUNTED AND WIRED IN EXHAUST FAN.
- VFD MOUNTING BRACKET FOR CASRE15DD.
- UTILITY SET GREASE CUP.

	JOB	
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naKS NORTH AMERICAN KITCHEN SOLUTIONS INCORPORATED

(2000 1.5hp/3ph-VFD) - EXHAUST PERFORMANCE CURVES.

2000 CFM, 1 SP @ 1604 RPM and 1.062 BHP at 0 feet and 70 deg F
 * Please note that these curves were adjusted for Job specific temperature and altitude.



JOB	
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VFD Wiring

JOB NAKS DD TK-RE Utility Sets

DRAWING NUMBER

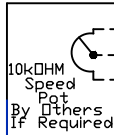
SHIP DATE

MODEL TK-RE15DD

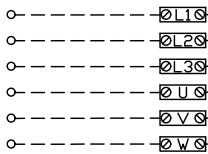
SMV SERIES VARIABLE FREQUENCY DRIVE

Installed Options
Manual Control

TERMINAL	FUNCTION
1	Digital Input(Start/Stop)
2	Analog Common
5	Analog Input: 0-10 VDC
6	Internal DC Supply for Speed Pot: +10 VDC
25	Analog Input: 4-20 mA
30	Analog Output
4	Digital Reference/Common
11	Internal DC Supply for External Devices
13A	Digital Input: Configurable with P121
13B	Digital Input: Configurable with P122
13C	Digital Input: Configurable with P123
14	Digital Output: Configurable with P142
30	Analog Output: Configurable with P150...P155
16	Relay Output: Configurable with P140
17	
PE	Ground Terminal
L1	3 Phase Input or Single Phase Input
L2	3 Phase Input or Single Phase Input
L3 (N)	3 Phase input (Neutral for 120v)
U	3 Phase AC Motor
V	3 Phase AC Motor
W	3 Phase AC Motor



NOT USED FOR EXHAUST FANS
OR NON-HEATED SUPPLY FANS
BURNER CIRCUIT CONTACT



TERMINAL BLOCKS
LOCATED IN HEATER UNIT
(IF SINGLE PHASE INPUT, UNIT MAY
NOT CONTAIN ALL TERMINAL BLOCKS)

EXHAUST FANS AND NON-HEATED
UNITS DO NOT HAVE TERMINALS

All external control wires to motor speed control should be 16-20 AWG shielded multiconductor cables and must not be run in the same conduit or raceway with any high power wiring. Ground Shielded Cable at the drive chassis ONLY.

PG. 11 OF THE DRIVE MANUAL DESCRIBES THE PROPER
INSTALLATION PROCEDURE

PG. 19 OF THE DRIVE MANUAL DESCRIBES THE PROGRAMMING
PROCEDURE OF THE DRIVE

PG. 23 OF THE DRIVE MANUAL DESCRIBES THE PARAMETER
SETTINGS OF THE DRIVE

NOTE: THE DEFAULT PASSWORD FROM THE FACTORY REQUIRED
TO PROGRAM THE DRIVE IS '225'.

SUPPLY DRIVE PARAMETER SETTINGS*

EPH PROGRAM: VAV_MAKUSE LG_HP EPH IF >= 15HP)
P100 (Start Source) = 01 (Terminal Strip)
P102 = ##Minimum Frequency (Hz)
P103 = ##Maximum Frequency (Hz)
(P103 is based on max wheel RPM)
P110 (Start Method) = 03 (Auto Re-start)
P140 (Form A (NO) Relay) = 01 (Run)
P144 (Relay Inversion) = 00 (None)
P166 (Carrier Frequency) = 00 (4 kHz)
P171 (Current Limit) = 150 (% of Max I)

Adjust manually on all drives
P107 = 00 (IF 120 or 208 VAC)
or 01 (IF 230, 480 or 575 VAC)
P108 = Motor FLA x 100 / Drive Output Rating
P165 (Base Voltage) = Set to Motor Voltage
(Preset@230V) P165 FOR STANDARD DRIVE ONLY
P167 (Base Frequency) = Calculated Per Fan
FOR KB PCU ONLY: P300 = 0

When Speed POT is Required the Following
Parameters Must be Set:
P101 (Reference Source) = 01 (0-10 VDC)
P160 (Speed @ 0 VDC Signal) = Min Frequency
P161 (Speed @ 10 VDC Signal) = Max Frequency

IT MAY BE REQUIRED TO FULLY POWER DOWN THE DRIVE
AND TURN BACK ON IN ORDER TO INITIATE NEW
PARAMETER SETTINGS.

##Min. and Max. Frequency Settings override all
other Preset speeds/Parameters.

GENERAL NOTES

Component Identification

MOTOR INFO
EXHAUST 1.5HP-208V-3P-4.4FLA
VFD PART: ESV112N02YXB

ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 5.5A
MOTOR/CTRL MDP: 15A

NOTES

--- DENOTES FIELD WIRING
_____ DENOTES INTERNAL WIRING

WIRE COLOR

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

Exhaust Fan Wiring

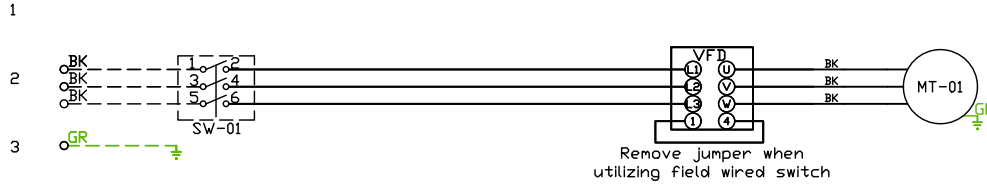
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MODEL **TK-RE15DD**

Installed Options



Component Identification		
Label	Description	Location
MT-01	Fan Motor	[2]
MT-02	Damper Motor	[2]
SW-01	Main disconnect switch	[2]

MOTOR INFO
 EXHAUST 1.5HP-208V-3P-4.4FLA
 VFD PART: ESV112N02YXB

ELECTRICAL INFORMATION
 MOTOR/CTRL MCA: 5.5A
 MOTOR/CTRL MCB: 15A

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

WIRE COLOR

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