

# BEFORE USING THIS GUIDE

Elektrim recommends that you contact Technical Support and/or Customer Service to discuss custom modification and application requirements, especially non-standard voltages.

Please be advised that non-standard voltages may require special wiring diagram and new nameplate with adequate parameters. In some cases, due to motor construction and/or application conditions, horsepower (HP) and service factor (SF) can be lowered.

If you elect to proceed without recommended consultation, Elektrim is not responsible for errors and/or damages as result of modification or use of this guide.

# What is this guide for?

This guide provides information for possible voltages on the most popular sized motors.

Elektrim recommends that you contact Technical Support and/or Customer Service at 800-992-4766 (847-524-1074 or support@Elektrim.com) to discuss custom modification and application requirements, especially non-standard voltages.

This guide, without Elektrim consultation, is to be used at your own risk.


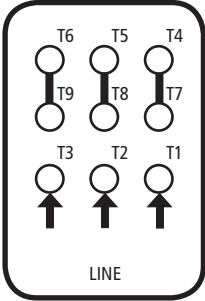

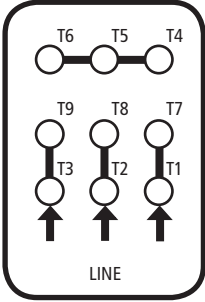
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# Elektrim® 20 Series Motors

## Possible Supply Voltages and Connection Diagrams for 9-Lead Motors

### 143T - 184T Frame


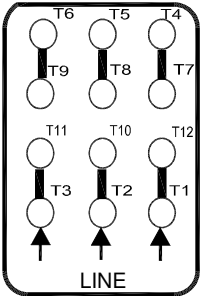

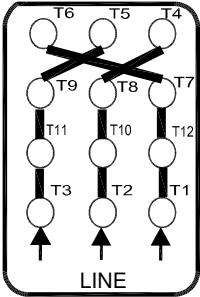
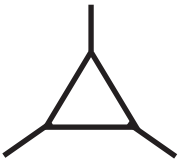
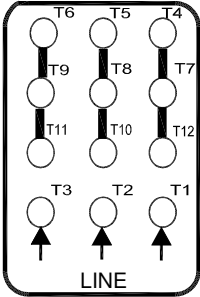

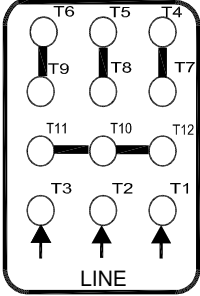
SUPPLY		CONNECTION DIAGRAM	LEADS CONNECTION
Volts	Hz		
460V	60 Hz		
480V	60 Hz		
400V	50 Hz		
400V	60 Hz		
380V	50 Hz		
380V	60 Hz		
415V	50 Hz		
415V	60 Hz		
440V	50 Hz		
575V	60 Hz		
600V	60 Hz		
230V	60 Hz		
208V	60 Hz		
230V	50 Hz		
220V	50 Hz		
200V	50 Hz		
240V	50 Hz		
190V	50 Hz		

# Elektrim® 20 Series Motors

## Possible Supply Voltages and Connection Diagrams for 12-Lead Motors

**NEMA 213T-445T (Output up to and including 100HP)**


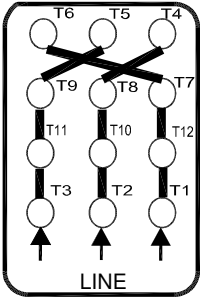
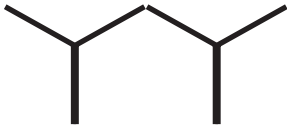
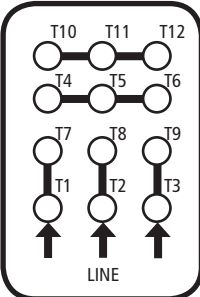
**METRIC IEC 132-315 (Output up to and including 125HP)**

SUPPLY		CONNECTION DIAGRAM	LEADS CONNECTION
Volts	Hz		
460V 480V 400V 400V 380V 380V 415V 415V 440V	60 Hz 60 Hz 50 Hz 60 Hz 50 Hz 60 Hz 50 Hz 60 Hz 50 Hz		
230V 208V 230V 220V 200V 240V 190V	60 Hz 60 Hz 50 Hz 50 Hz 50 Hz 50 Hz 50 Hz		
575V 600V 525V 500V	60 Hz 60 Hz 50 Hz 50 Hz		
796V 690V 660V	60 Hz 50 Hz 50 Hz		

# Elektrim® 20 Series Motors

## Possible Supply Voltages and Connection Diagrams for 12-Lead Motors

### NEMA 444T and up (Output starting 125HP and up)

SUPPLY		CONNECTION DIAGRAM	LEADS CONNECTION
Volts	Hz		
460V	60 Hz		
480V	60 Hz		
400V	50 Hz		
400V	60 Hz		
380V	50 Hz		
380V	60 Hz		
415V	50 Hz		
415V	60 Hz		
440V	50 Hz		
796V	60 Hz		
690V	50 Hz		
660V	50 Hz		

# De-Rating Factors for Elektrim® 3PH TEFC Motors

Relation between motor's HP, Ambient Temperature and Altitude

AMBIENT TEMPERATURE		40°C	45°C	50°C	55°C	60°C	65°C
Feet	Meters	Factor Correction to be Applied to HP of SF of the Motor					
3300	1000	1.00	0.96	0.90	0.86	0.82	0.73
4900	1500	0.97	0.93	0.87	0.83	0.80	0.70
6500	2000	0.94	0.90	0.85	0.81	0.77	0.69
8200	2500	0.90	0.86	0.81	0.77	0.74	0.66
10000	3000	0.86	0.83	0.77	0.74	0.71	0.63
11500	3500	0.82	0.79	0.74	0.71	0.67	0.60
13000	4000	0.77	0.74	0.70	0.66	0.63	0.56

Maximum Speed Range of standard Elektrim Premium Efficient motors for Variable Frequency Drive

- 20:1 Variable Torque
- 10:1 Constant Torque

FRAME	2-Poles	4-Poles	6-Poles	8-Poles
	RPM			
140 - 210	5000	5000	3000	2500
250 - 280	4000	4000	2700	2000
320 - 360	4500	2700	2000	2000
400 - 440	4000	2700	2000	2000
447 - 449	3600	2500	1800	1500
586 - 587	3200	2500	1800	1500
Above	3200	2200	1800	1500