

Technical Documentation

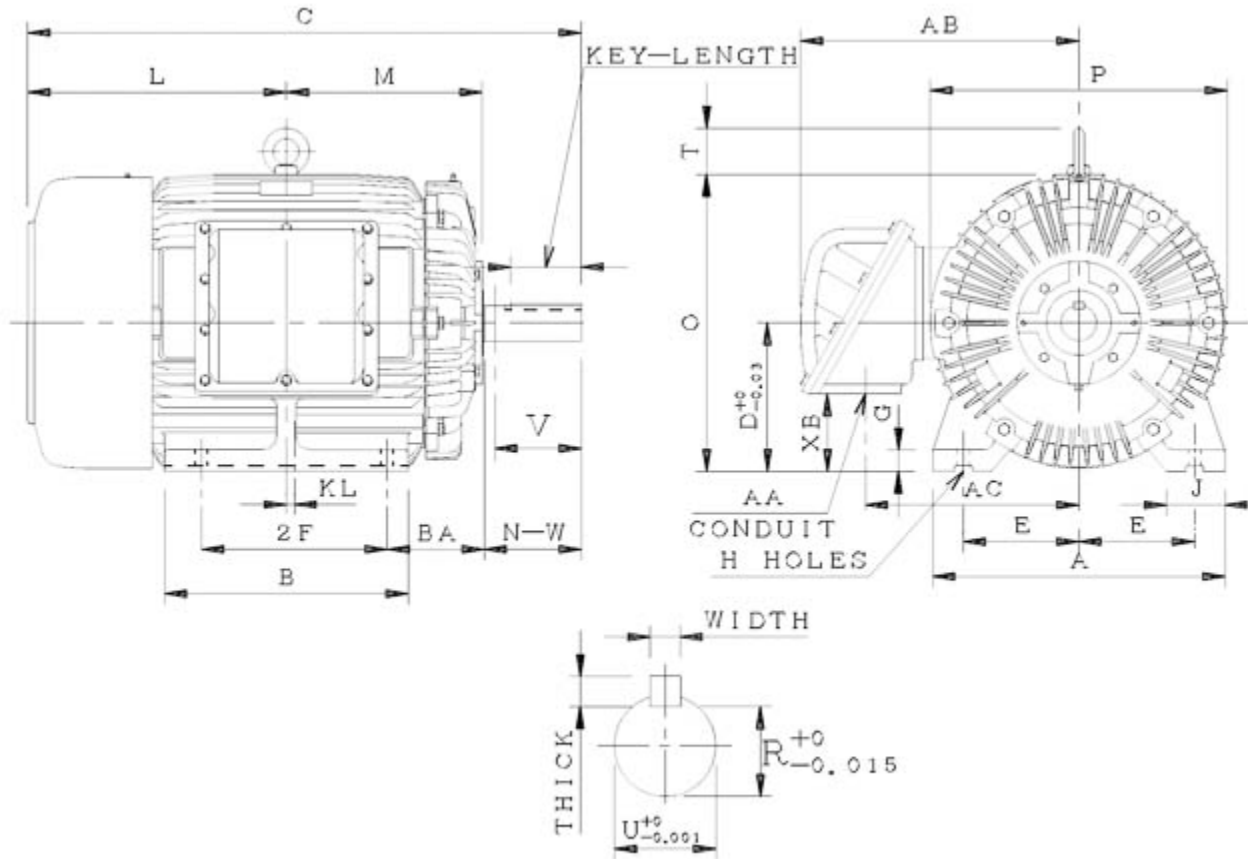
# **XH0504**

## **Optim TEXP | AEHHXU**

Date: December 1, 2016

**Dimensional Drawing**

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
XH0504	AEHHXU	50	4	37	Continuous	230 / 460 V	60	1800



AEHHXU-SMP-4 1 0

Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
326T	6.25	12		0.66	5.25	15.75	14.35	31.42		8	
G	J	K	L	M	O	P	T	Key			Keyseat
1.1	3.15		14.92	11.04	16.22	16.54	2.36	Width	Thick	Length	R
								0.5	0.5	3.91	1.845
Terminal Housing				Aux Box		C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
NPT2"	16.18	12.17	3.31								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
5.25	2.125	5.15	6312	6212	781	70	F	1.15	Direct Coupling / Belt Drive	Inches	

### Technical Data Sheet

Motor Type: AEHHXU

Catalogue No: XH0504

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
50	4	1775	326T	230 / 460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEXP	F	1.15	Continuous	C	-40 to 40 °C	<3300 ft

#### Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
94.5	93.6	95.0	95.0	85.5	84.5	79.0
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
148	240	185	210	27.9 / 14.0	116.0 / 57.9	725 / 363
NEMA KVA Code	Inertia (WR <sup>2</sup> )			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft <sup>2</sup> )	NEMA Load (lb-ft <sup>2</sup> )	Max. Allowable (lb-ft <sup>2</sup> )	Cold	Hot	
G	10.124	232	366	17	12	70

#### VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
6-60Hz	3-60Hz	60-90Hz	≤ 5 kHz	VPWM or CPWM	1.0 Only

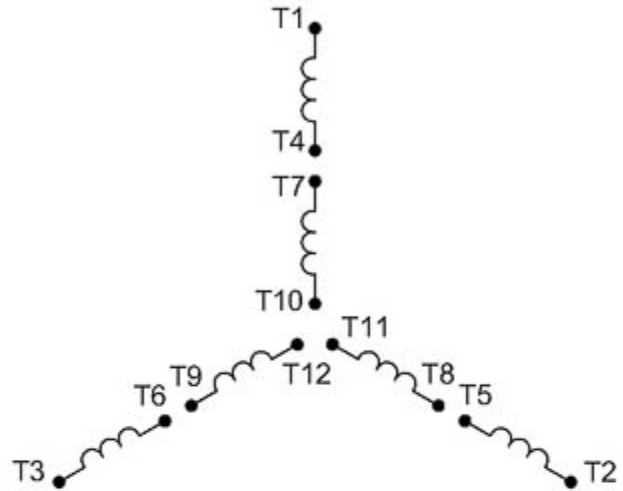
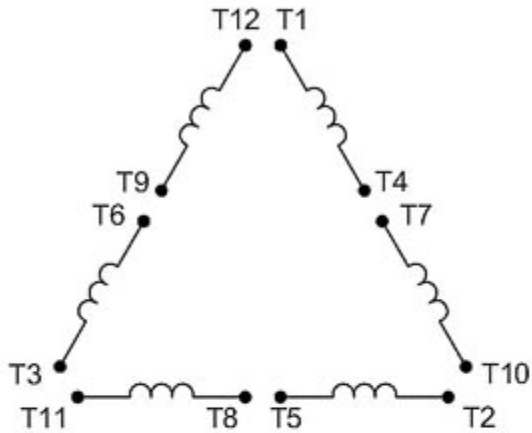
#### Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6312	6212	781

#### Hazardous Locations Information

CSA/UL Certified	
Class I, Div 1, Groups D; Class II, Div 1, Groups E, F & G Class I, Zone 1, Groups IIA; Class II, Div 1, Groups E, F & G	
Temp Code (Sinewave / VFD)	T3B / T3B

**Connection Diagram**

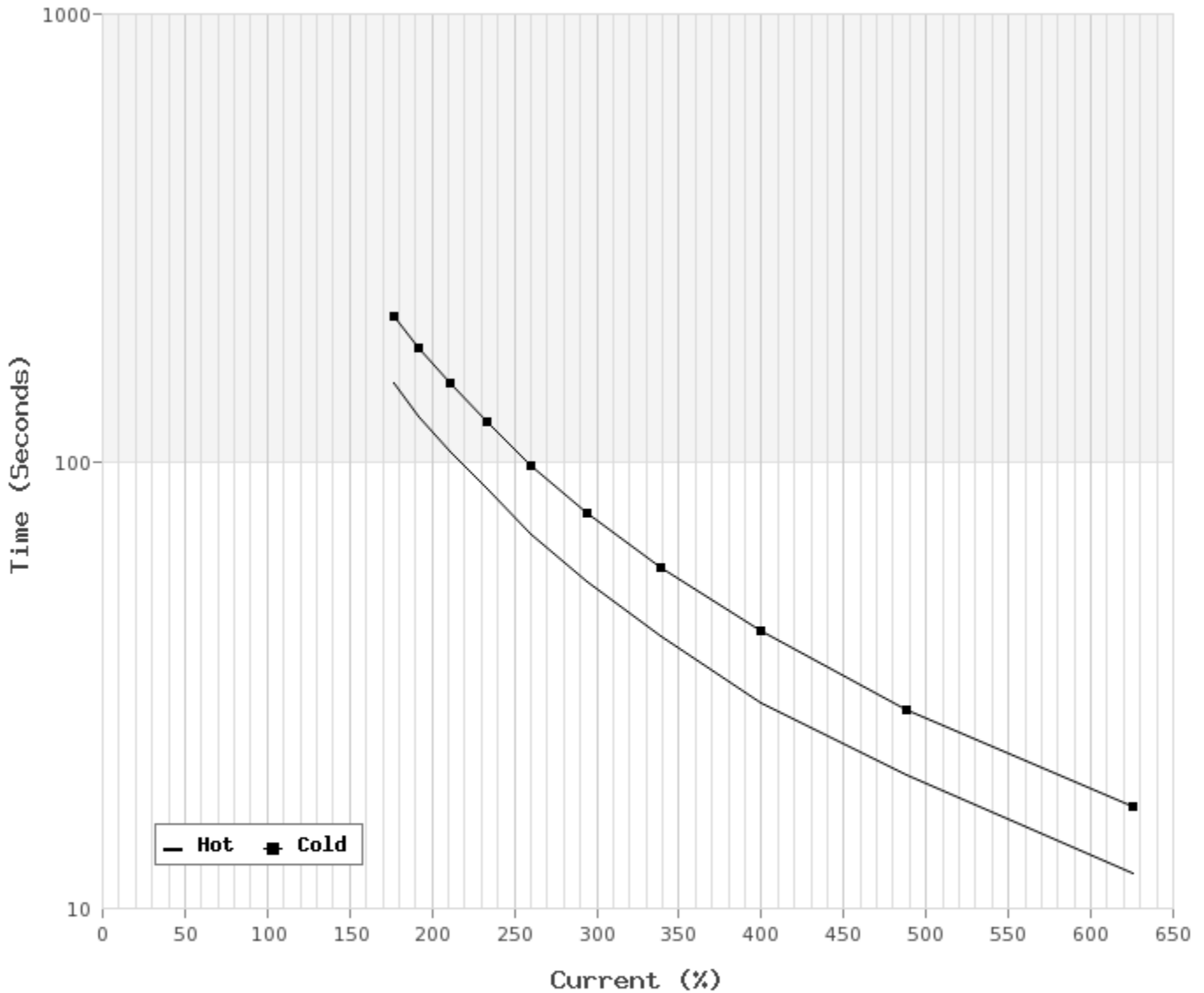


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD\_12YD

**Thermal Limit Curves**

Motor Type: AEHHXU		Catalogue No: XH0504		Family: Optim TEXP	
HP	50	Safe Stall Time		Full Load A	116.0 / 57.9 A
Voltage	230 / 460V 60Hz	Hot	12 s	Locked Rotor A	625 / 627 %
RPM	1800	Cold	17 s	Locked Rotor A	725.0 / 363 A



**T-N and I-N Curves**

Motor Type: AEHHXU		Catalogue No: XH0504		Family: Optim TEXP	
HP	50	Full Load T	148 lb-ft	Full Load A	116.0 / 57.9 A
Voltage	230 / 460V 60Hz	Locked Rotor T	240 %	Locked Rotor A	725.0 / 363.0 A
RPM	1800	Pull Up T	185 %	Break Down T	210 %

