

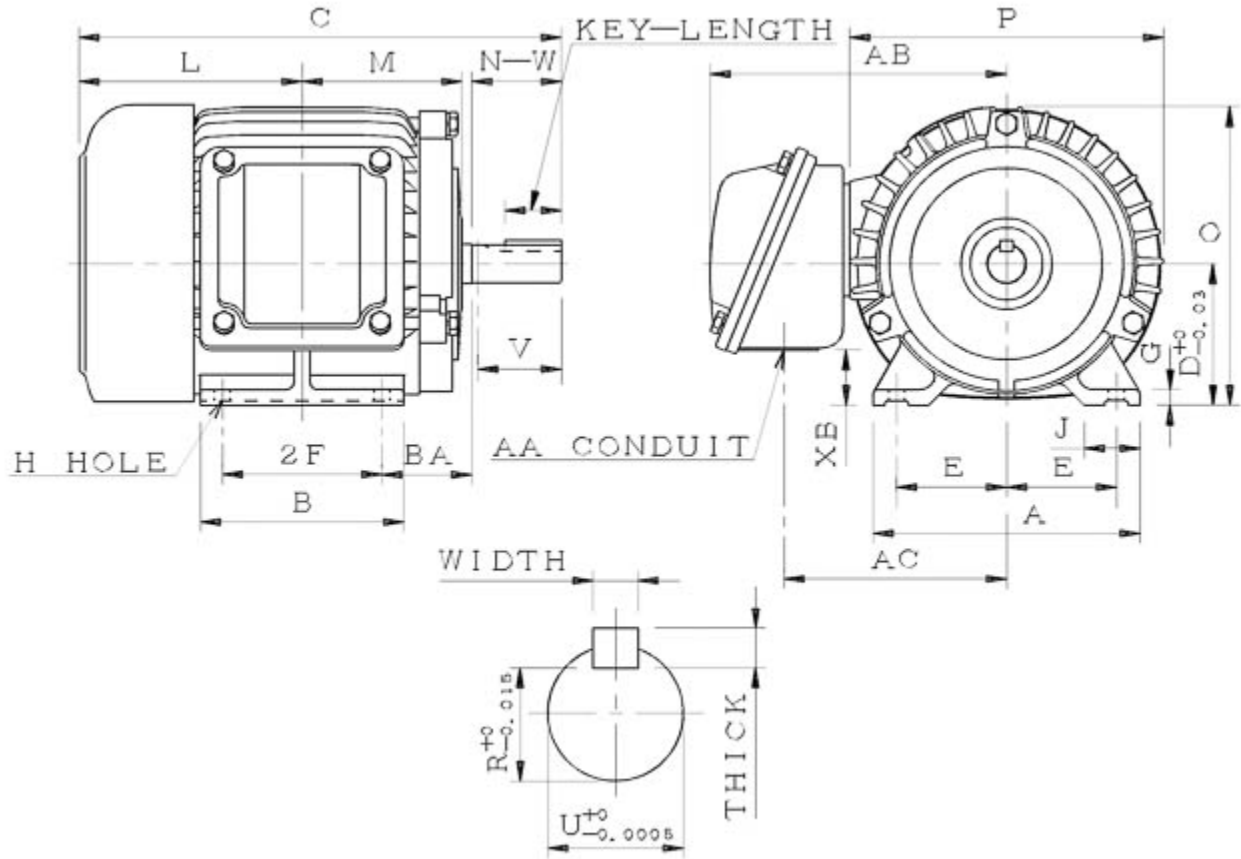
Technical Documentation

**XC1/545**  
**Optim TEXP | AEHHXV**

Date: July 10, 2017

**Dimensional Drawing**

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
XC1/545	AEHHXV	1.5	4	1.1	Continuous	575 V	60	1800



AEHHXV-SMP-1 1 0

Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
145T	2.75	5		0.34	2.25	6.7	5.9	13.54		3.5	
G	J	K	L	M	O	P	T	Key			Keyseat
0.35	1.4		6.54	4.55	7.5	8.03		Width	Thick	Length	R
								0.188	0.188	1.41	0.771
Terminal Housing				Aux Box		C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
NPT3/4"	8.03	5.7	1.33								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
2.25	0.875	2.2	6205ZZ	6205ZZ	70	50.0	F	1.15	Direct Coupling / Belt Drive	Inches	

### Technical Data Sheet

Motor Type: AEHHXV

Catalogue No: XC1/545

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
1.5	4	1740	145T	575	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 °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.					
86.5	84.0	87.0	85.5	75.5	67.0	53.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
4.5	300.0	305.0	375.0	1.0	1.7	16
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	
M	0.1	8.6	34.0	31.0	22.0	50.0

#### VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
12-60Hz	3-60Hz	60-90Hz	≤ 5 kHz	VPWM or CPWM	1.0 Only

#### Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6205ZZ	6205ZZ	70

#### Hazardous Locations Information

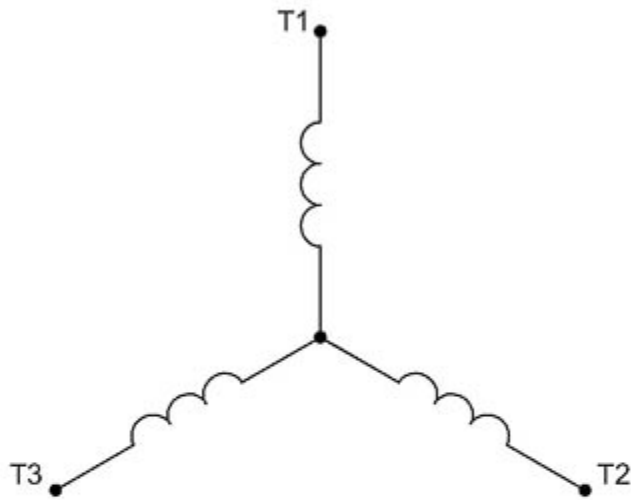
CSA/UL Certified	
Class I, Div 1, Groups C & D; Class II, Div 1, Groups E, F & G Class I, Zone 1, Groups IIB & IIA; Class II, Div 1, Groups E, F & G	
Temp Code (Sinewave / VFD)	T3B / T3B

**Nameplate Drawing**

# Optim TEXP

TYPE	AEHHXV	CAT. NO.	XC1/545		
OUTPUT	1.5 HP 1.1 kW	FRAME	145T	TEXP	
R.P.M.	1740	POLE	4	INS.	F
VOLTS	575	PHASE	3	Hz	60
AMPS	1.7	CODE	M	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 86.5		MIN. EFF. 84.0	
BEARINGS	6205ZZ / 6205ZZ			RATING Cont.	
SER. NO.	TBD	DESIGN	C	WT. 70 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	12-60Hz	60-90Hz	1.0 Only	

**Connection Diagram**

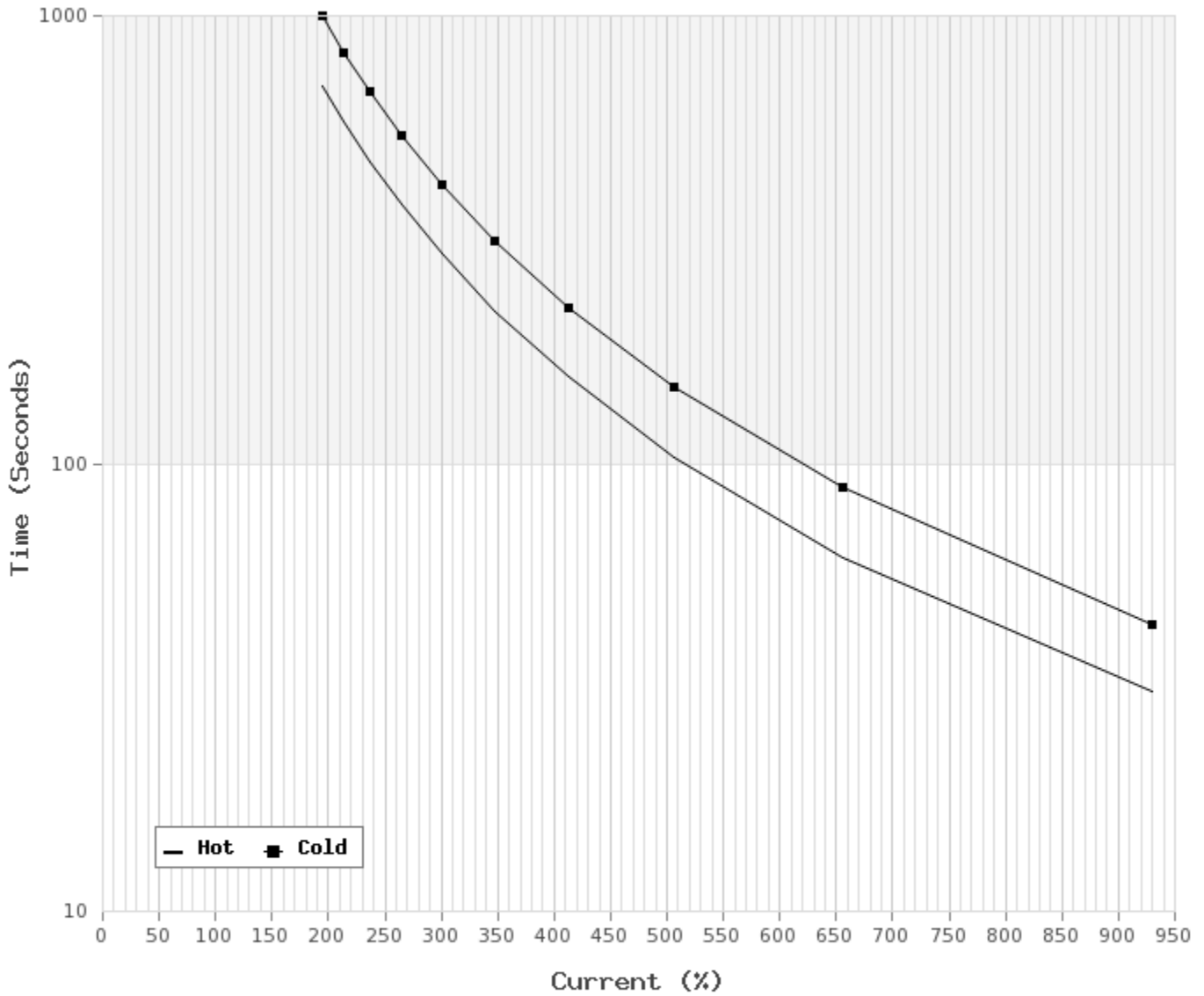


3 LEAD		SINGLE VOLTAGE			WYE
VOLTAGE	CONN.	L1	L2	L3	
-	WYE	1	2	3	

WD\_3Y

**Thermal Limit Curves**

Motor Type: AEHHXV		Catalogue No: XC1/545		Family: Optim TEXP	
HP	1.5	Safe Stall Time		Full Load A	0.0 / 1.7 A
Voltage	0 / 575V 60Hz	Hot	22.0 s	Locked Rotor A	930 %
RPM	1800	Cold	31.0 s	Locked Rotor A	0.0 / 16 A



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

Motor Type: AEHHXV		Catalogue No: XC1/545		Family: Optim TEXP	
HP	1.5	Full Load T	4.5 lb-ft	Full Load A	1.7 A
Voltage	575V 60Hz	Locked Rotor T	300.0 %	Locked Rotor A	16.0 A
RPM	1800	Pull Up T	305.0 %	Break Down T	375.0 %

