



Beaver Electrical Machinery Ltd.

Date: July 25, 2022



Technical Documentation

APH0404-841

Advantage Plus IEEE 841 | AEHH8B

Beaver Electrical Machinery Ltd.
Date: July 25, 2022



Dimensional Drawing

Catalogue	Type	HP	RPM	Voltage	Hz	Frame Size
APH0404-841	AEHH8B	40	1800	460	60	324T

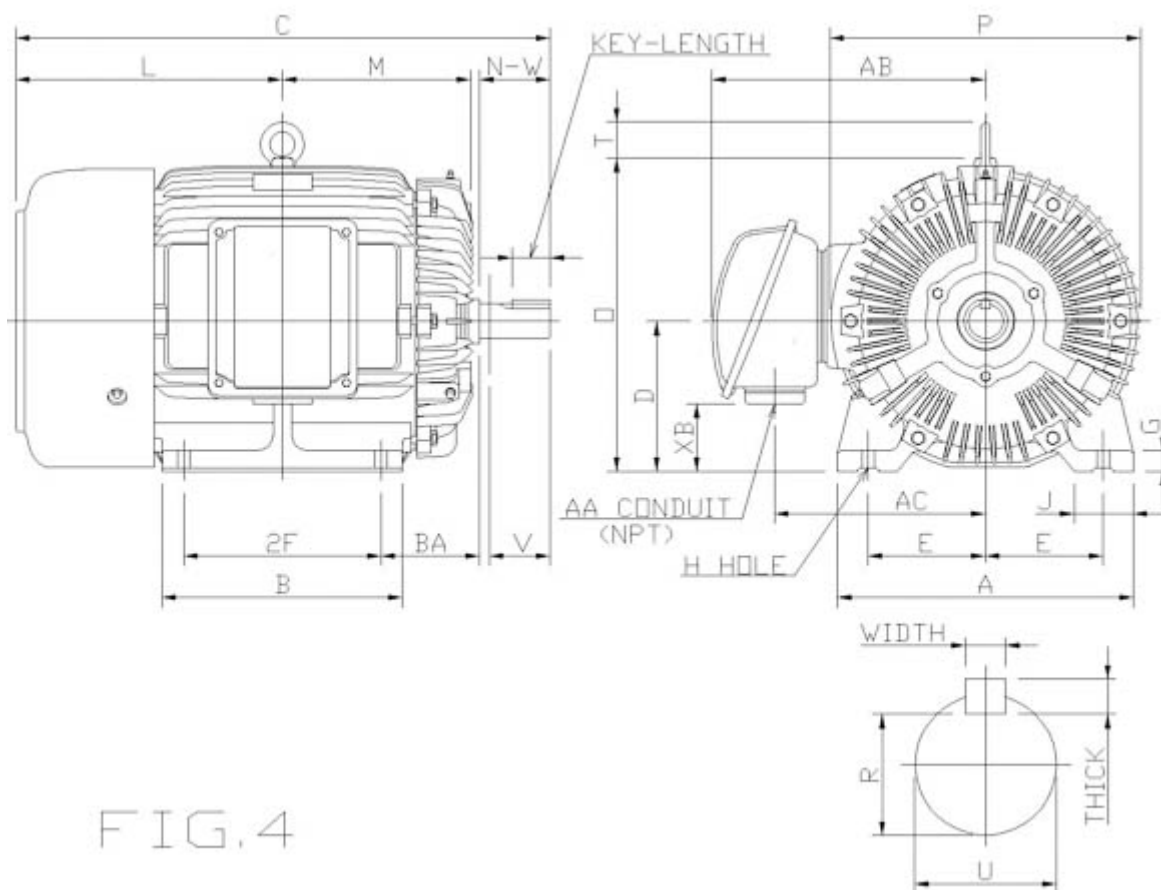


FIG. 4



Mounting					A	B	C	CL1	CL2	D	G
E	2F1	2F2	H	BA							
6.25	10.5		0.66	5.25	15.75	12.8	29.93			8	1.1

J	K	L	M	O	P	T
3.15		14.18	10.1	16.22	16.55	2.36

Terminal Housing			
AA	AB	AC	XB
NPT2"	14.72	11.3	3.59

Shaft Extension			Key			Keyseat
N-W	U	V	Width	Thick	Length	R
5.25	2.125	5.15	0.5	0.5	3.91	1.845

Bearings		Weight Lbs	Drive Method	Dimensions
DE	NDE			
6312ZC3	6212ZC3	658	Direct Coupling / Belt Drive	Inches

	Beaver Electrical Machinery Ltd.	
	Date: July 25, 2022	

Technical Data Sheet

Motor Type: AEHH8B	Catalogue No: APH0404-841
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Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
40	4	1770	324T	460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEFC	F	1.15	Continuous	B	-40 to 40 °C	<1000 m

Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
94.1	93	94.5	94.5	86	84.5	78.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
118.7	205	170	220	10.6	46.3	290
NEMA KVA Code	Inertia (WR ²)			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft ²)	NEMA Load (lb-ft ²)	Max. Allowable (lb-ft ²)	Cold	Hot	
G	8.624	189	375	25	18	74

VFD Duty Information

Max HP	Current (A)	Speed Range		VFD		S.F.
		Constant Torque	Variable Torque	Carrier Hz	Type	
40	46.28	6-60Hz	3-60Hz	3-6kHz	VPWM or CPWM	1

Hazardous Locations Information



CSA Certified	
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA	
Temp Code (Sinewave / VFD)	T3C / T3B

Additional Certifications

Other Certification

Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6312ZC3	6212ZC3	658

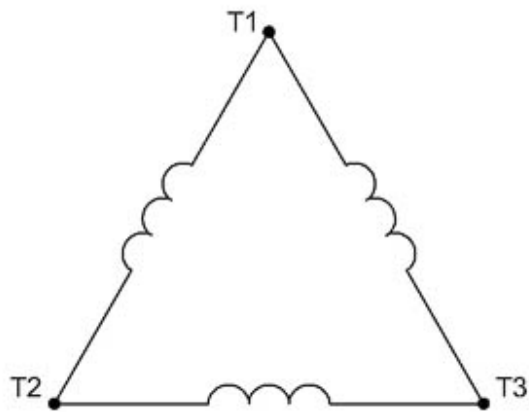
	Beaver Electrical Machinery Ltd.	
	Date: July 25, 2022	

Nameplate Drawing

Advantage Plus IEEE 841					
TYPE	AEHH8B		CAT. NO.	APH0404-841	
OUTPUT	40 HP 29.84 kW		FRAME	324T	TEFC
R.P.M.	1770		POLE	4	INS. F
VOLTS	460		PHASE	3	Hz 60
AMPS	46.3		CODE	G	S.F. 1.15
AMBIENT	40 °C		NOM. EFF. 94.1		MIN. EFF. 93
BEARINGS	6312ZC3 / 6212ZC3				RATING Cont.
SER. NO.	TBD		DESIGN	B	WT. 658 LBS
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-90Hz	1	



Connection Diagram



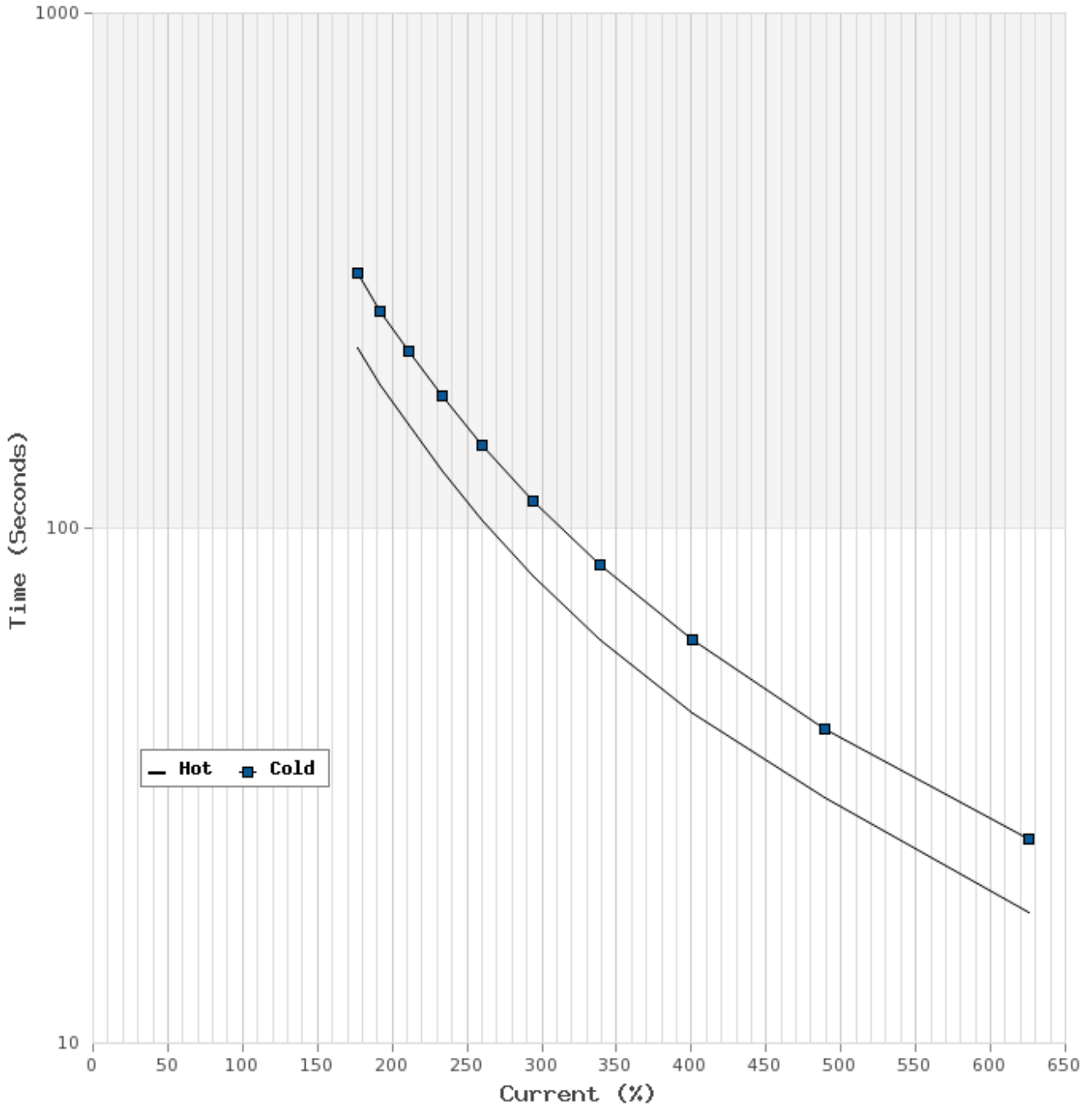
3 LEAD SINGLE VOLTAGE DELTA					
VOLTAGE	CONN.	L1	L2	L3	
-	DELTA	1	2	3	

WD_3D



Thermal Limit Curves

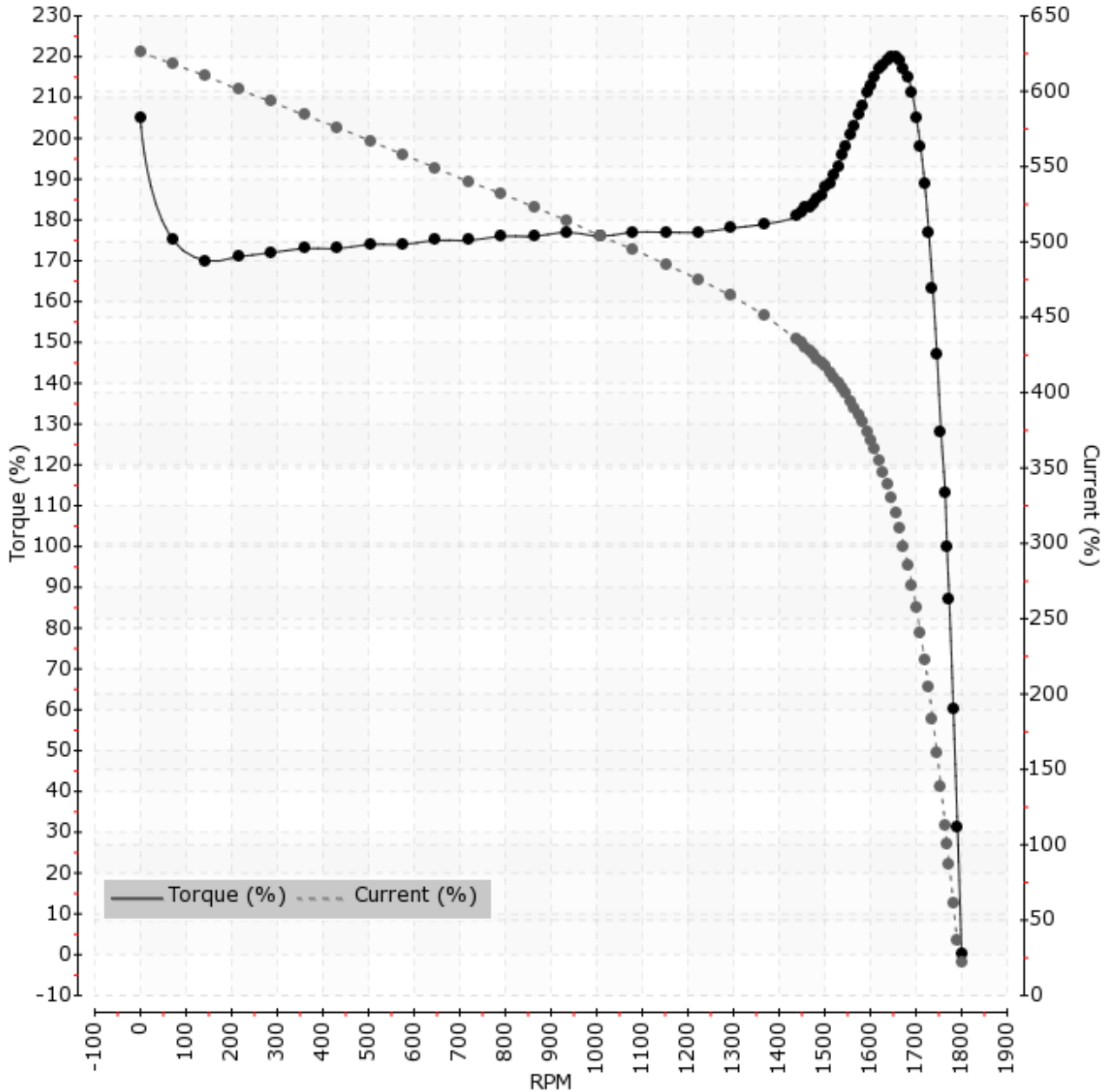
Motor Type: AEHH8B		Catalogue No: APH0404-841		Family: Advantage Plus IEEE 841	
HP	40	Safe Stall Time		Full Load A	46.3 A
Voltage	460V 60Hz	Hot	18 s	% Inrush	627 %
RPM	1800	Cold	25 s	Locked Rotor A	290 A





T-N and I-N Curves

Motor Type: AEHH8B		Catalogue No: APH0404-841		Family: Advantage Plus IEEE 841	
HP	40	Full Load T	118.7 lb-ft	Full Load A	46.3 A
Voltage	460V 60Hz	Locked Rotor T	205 %	Locked Rotor A	290.0 A
RPM	1800	Pull Up T	170 %	Break Down T	220 %





Dimensional Drawing (50 Hz)

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
APH0404-841	AEHH8B	40	4	29.84	Continuous	380	50	

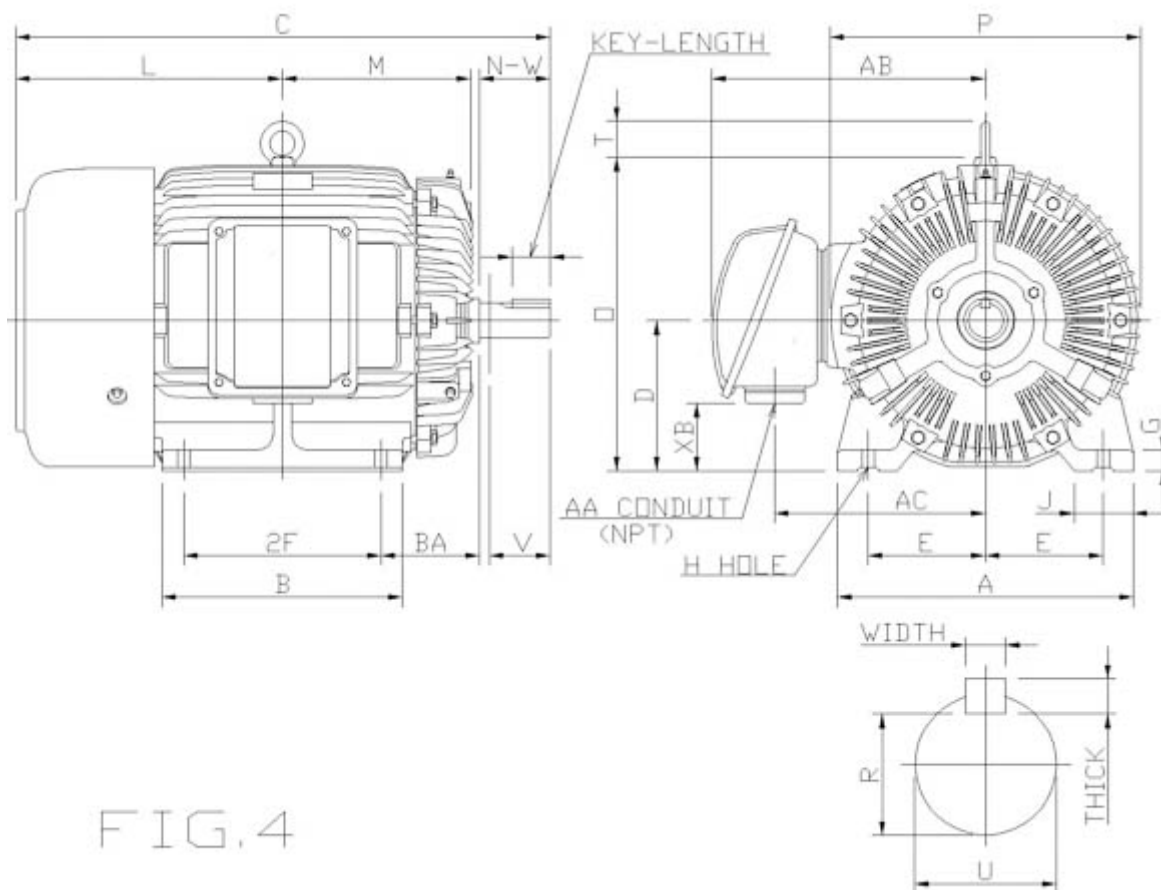




FIG. 4

Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
324T	6.25			0.66	5.25	15.75	12.8	29.93		8	
G	J	K	L	M	O	P	T	Key			Keyseat
1.1	3.15		14.18	10.1	16.22	16.55	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"	14.72	11.3	3.59								
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	6312ZC3	6212ZC3	658	74	F	1	Direct Coupling / Belt Drive	Inches	

	Beaver Electrical Machinery Ltd.	
	Date: July 25, 2022	

Technical Data Sheet (50 Hz)

Motor Type: AEHH8B	Catalogue No: APH0404-841
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Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
40	4		324T	380	50	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEFC	F	1	Continuous	B	-40 to 40 °C	<1000 m

Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
93	91.7	93.6	94.1	87	87.50	85.00
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
143	135	120	185	10.3	56.0	387
NEMA KVA Code	Inertia (WR ²)			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft ²)	NEMA Load (lb-ft ²)	Max. Allowable (lb-ft ²)	Cold	Hot	
H	8.624	293.3	441.43	17	12	74

VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
6-50Hz	3-50Hz	50-75Hz	3-6kHz	VPWM or CPWM	1

Hazardous Locations Information

CSA Certified
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA
Temp Code (Sinewave / VFD) T3C / T3B

Additional Certification

Other Certification

Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6312ZC3	6212ZC3	658